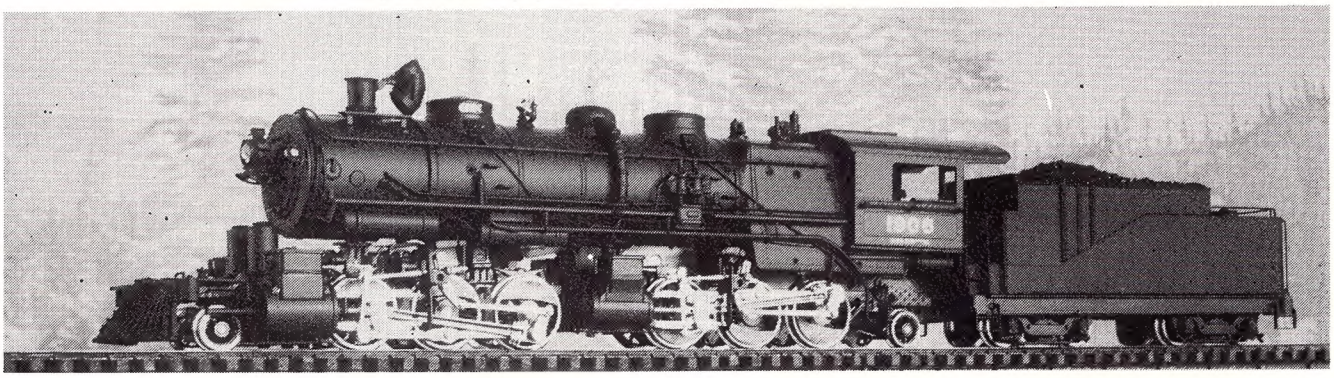
Australian
JANUARY/FEBRUARY, 1979. ISSUE 94 Vol. 9 No. 1
90c*

# MODEL RAILWAY

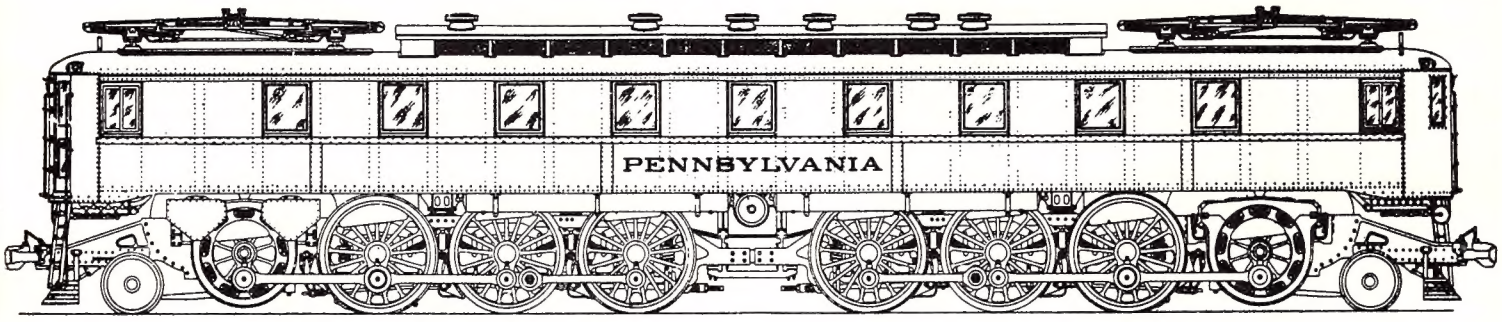
## Magazine

Registered for posting as a periodical — Category B.
* Recommended retail price only.

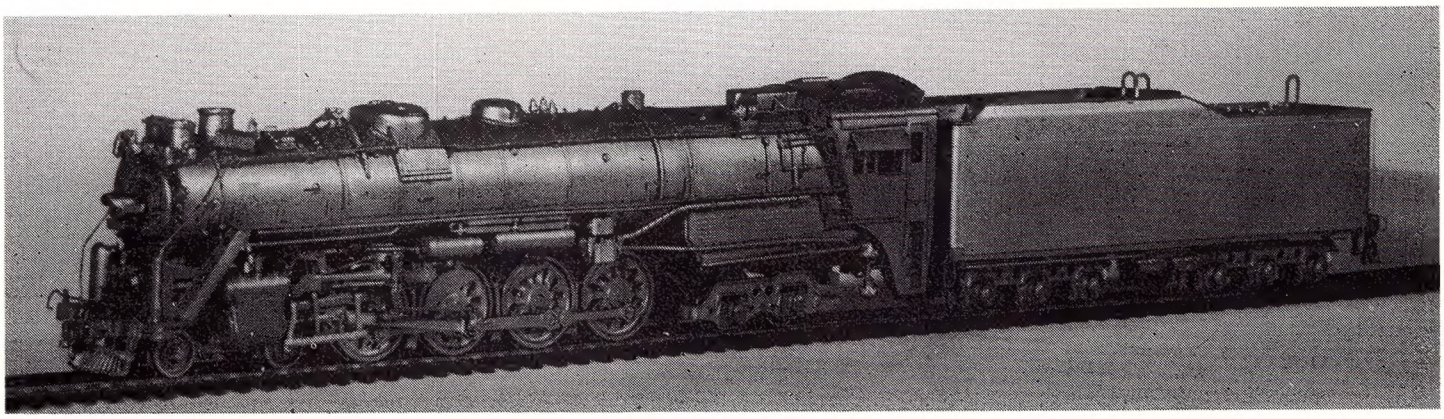
# NEW MOTIVE POWER....
# — NOW ON THE 'READY TRACK'....



THE ALL-NEW GN 'L1' 2-6-6-2 LOCO & TENDER, by TENSHODO.
Supplied Painted and Lettered. Price: $1137.50.

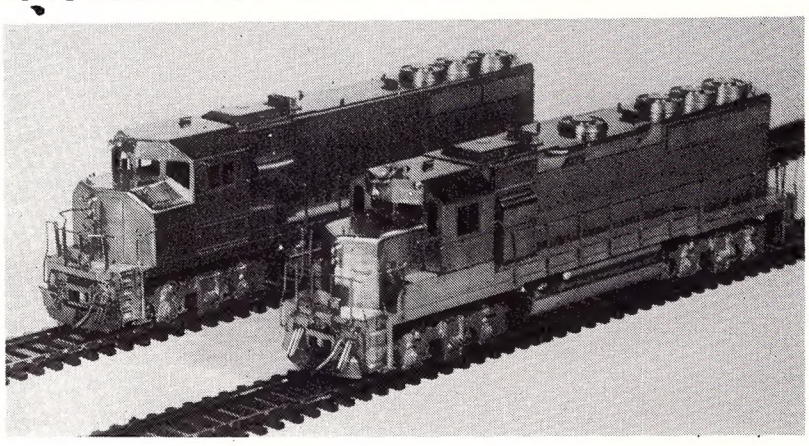



PRR 'FF-1' SERIES ELECTRIC LOCOMOTIVE. FROM THE SHOPS OF CUSTOM MODELS. PRICE: $417.50.



KEY MODELS' "CLASSIC SERIES" D&RGW 4-8-4 'M-68' CLASS LOCO & TENDER. DETAILED DOWN TO INDIVIDUALLY SPRUNG TENDER JOURNALS! PRICE: $395.00.

NOW TO HAND FROM THE SHOPS OF KUMATA THE CNR 'GP-40' (lower track) and 'GP-40-2' (upper track) DIESEL LOCOMOTIVES. EITHER MODEL, $226.95 each.



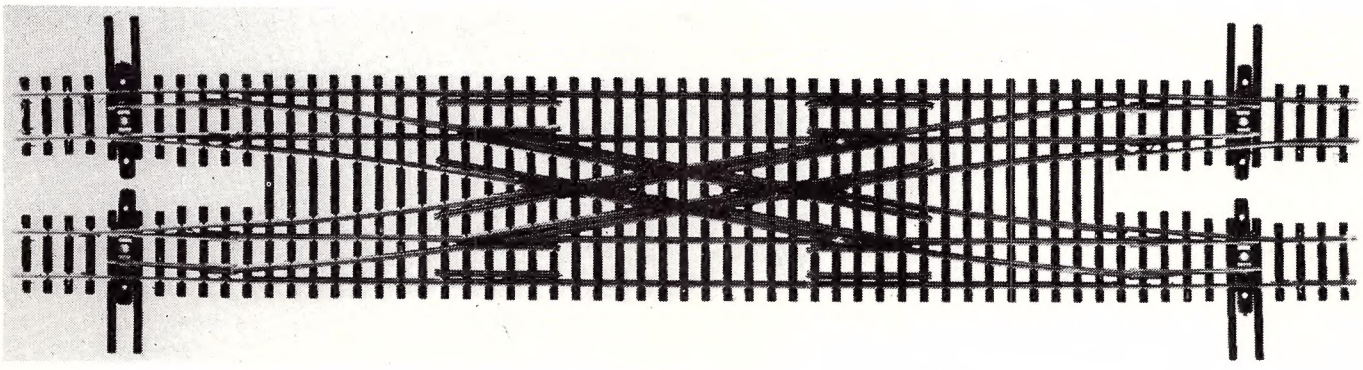
Recent arrivals include Custom Brass' UP 3 unit coal fired Gas-Turbine locomotives, painted and finished, $975.85 and Overland Models' UP 4-10-2 '5090' series loco & tender, $363.00.
DUE SHORTLY: United HOn3 2-6-6-2 UINTAH Tank MALLET loco and HOn3 2-8-8-2 D&RGW 'K-37' loco & tender. Overland Models' 4-8-4 RF&P "Statesman" and Westside Models' HO 3 truck 'C-1' and HOn3 2 truck 'B-1' SHAY GEARED LOCOMOTIVES. Also ALCO MODELS' UP 3 unit oil fired Gas-Turbine locomotive, with twin motors and full size builders plate (supplied separately).

SOLE AGENT & IMPORTER

## THE MODEL DOCKYARD PTY. LTD.

216-218 SWANSTON ST. MELBOURNE. PHONE: 663 3505

# "SHINOHARA"



## THE FINEST RANGE OF TRACKWORK
For
## HO & N SCALE MODEL RAILROADERS

### HO GAUGE NICKLE SILVER, CODE 100, NMRA STANDARD

| | Suggested Selling prices at 1-12-78 |
|---|---|
| No 4 Turnout, Left or Right Hand | $5.25 ea |
| No 6 Turnout, Left or Right Hand | $7.95 ea |
| No 8 Turnout, Left or Right Hand | $7.75 ea |
| No 6 Curved Turnout, Left or Right Hand | $9.15 ea |
| No 8 Curved Turnout, Left or Right Hand | $11.50 ea |
| No 4 "Y" Turnout | $5.80 ea |
| No 6 Three Way Turnout | $15.45 ea |
| No 4 Double Crossover | $16.70 ea |
| No 6 Double Crossover | $19.15 ea |
| No 6 Single Crossover, Left or Right Hand | $9.50 ea |
| No 4 Double Slip | $13.50 ea |
| No 6 Double Slip | $20.00 ea |
| Flexible Track, one metre length | $3.45 ea |
| Flexible Track, with check rail, 19½" length | $3.30 ea |
| 9 Degree 30 Minute Crossing, Left or Right Hand | $7.70 ea |
| 30 Degree Crossing | $5.95 ea |
| 45 Degree Crossing | $5.95 ea |
| 60 Degree Crossing | $5.95 |
| 90 Degree Crossing | $5.95 ea |
| Metal Rail Joiners, per pack of 12 | 95¢ ea |
| Plastic Rail Joiners, per pack of 12 | 50¢ |

### HO GAUGE NICKLE SILVER, CODE 70 NMRA STANDARD

| | |
|---|---|
| No 4 Turnout, Left or Right Hand | $5.15 ea |
| No 6 Turnout, Left or Right Hand | $7.35 ea |
| No 8 Turnout, Left or Right Hand | $4.45 ea |
| No 8 Curvable Turnout, Left or Right Hand | $10.85 ea |
| No 4 "Y" Turnout | $4.15 ea |
| No 6 Three Way Turnout | $14.75 ea |
| No 6 Double Slip | $14.60 ea |
| Flexible Track, one metre length | $3.55 ea |
| Metal Rail Joiners, per pack of 12 | $1.15 ea |
| Plastic Rail Joiners, per pack of 12 | 80¢ ea |

### HOn3 GAUGE NICKLE SILVER, CODE 70, NMRA STANDARD

| | |
|---|---|
| No 4 Turnout, Left or Right Hand | $4.85 ea |
| No 6 Turnout, Left or Right Hand | $5.70 |
| Flexible Track, one metre length | $3.40 ea |

### DUAL HO/HOn3 GAUGE NICKLE SILVER, CODE 70, NMRA STANDARD

| | |
|---|---|
| Flexible Track, one metre length | $4.85 ea |
| Transition Track Section, Left or Right Hand | $3.70 ea |
| No 6 Left hand Turnout, 'L-1', with common rail on outside | $12.50 ea |
| No 6 Left hand turnout, 'L-2', with common rail on inside | $12.50 ea |
| No 6 Right Hand Turnout, 'R-1', with common rail on inside | $12.50 ea |
| No 6 Right Hand Turnout, 'R-2', with common rail on outside | $12.50 ea |

### N GAUGE NICKLE SILVER, CODE 70, NMRA STANDARD

| | |
|---|---|
| Flexible Track, 90cm length | $3.45 ea |
| No 4 Turnout, Left or Right Hand | $5.45 ea |
| No 6 Turnout, Left or Right Hand | $4.80 ea |
| No 6 Double Crossover | $23.85 ea |
| No 6 Three Way Turnout | $18.35 ea |
| 30 Degree Crossing | $5.85 ea |
| 45 Degree Crossing | $5.85 ea |
| 60 Degree Crossing | $5.85 ea |
| 90 Degree Crossing | $5.85 ea |

### ACCESSORIES

| | |
|---|---|
| Kumata Point Motor | $3.85 ea |
| Tenshodo Point Motor | $7.15 ea |
| C I Point Lever, Sprung | $1.80 ea |
| C I Point Lever, Rigid | $1.45 ea |
| C T Wheel Stops, per 2 pr | $1.20 pkt |
| C2 Bumper Kit | $1.90 ea |

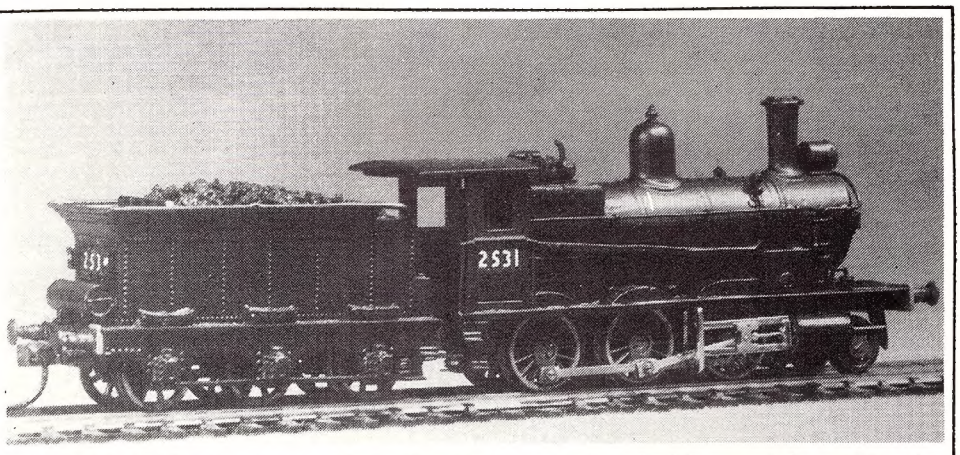
SOLE AGENT & IMPORTER

**THE MODEL DOCKYARD PTY. LTD.**

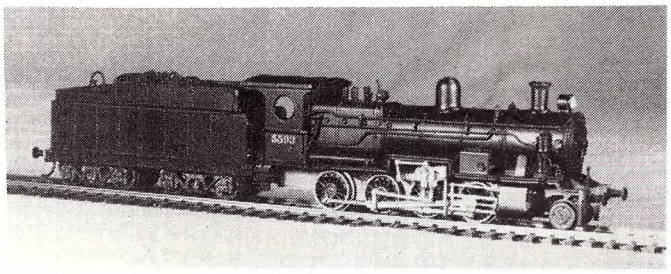
**216-218 SWANSTON ST. MELBOURNE. PHONE: 663 3505**

# FSM

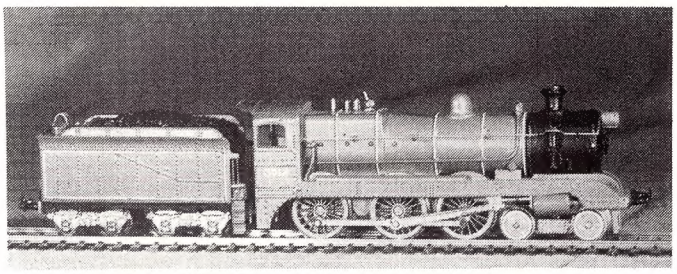
N.S.W.G.R.
Z18 Class Tank Locomotive
Kit. HO scale. $68 posted.




N.S.W.G.R. Z25 Class locomotive and tender kit, redesigned with motor in loco. HO scale. $78.00 posted.



N.S.W.G.R. D55 Class loco and tender kit. HO scale. $115.50 posted.



N.S.W.G.R. C35 Class loco and tender kit. HO scale. **$97.50 posted.**

*With the NSWGR Z25 Class kit now back in production, available in Standard or extended smokebox, work on the NSWGR Z24 with internally sprung tender is proceeding, and should be available by the time this magazine reaches you. By then we will be working on the D53 Class with Wampu Tender, which should be available in the March/April AMRM issue. It will be possible to select the particular tender of your choice for the D53 and D55 as well as the Standard Goods Turret Tender for the C35 loco as they ended their days.*

**FINECRAFT SCALE MODELS PTY LTD (Established 1947)**
**P.O. Box 169. FORESTVILLE. N.S.W. 2087**

**SEND S.S.A.E. FOR OUR PRICE LIST**
**23 Tottenham St., Balgowlah. 2093**

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IN THE
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Send large S.A.E. for full lists.
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Model Trains and accessories
at big Discounts

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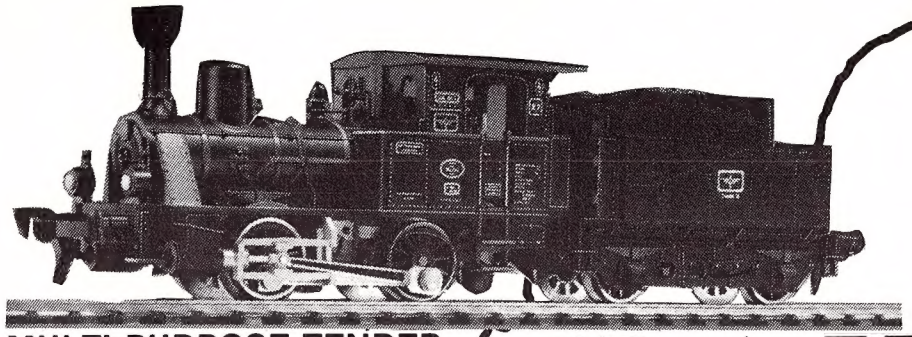
Are specialists in Marklin and offer this expert knowledge to all Marklin lovers

A large range of genuine Marklin spare parts is supplied direct from the manufacturer

We carry out specialised repairs to all Marklin equipment and perform Marklin two-rail conversions at low prices
An extensive range of used Marklin equipment is carried, as are also supplies of discontinued items which are in great demand — write for details
We offer big discounts and suggest you try us first for the very best deal — remember — it will only cost you 20¢ and may save you many dollars
Other equipment carried includes — Vollmer, Peco, Rivarossi, Roco, Kibri, Pola, AMC and AMRI Products, Locomotion, Minitrix, Marklin 2-rail DC, HO and N Gauge where applicable

Applications taken for subscription to the Marklin Magazine

**Ring**
**(046)25 5861 or (046) 25 1745 for information or write to:**
**PO Box 490, Campbelltown 2560 for further information**
**Inspection by appointment only**



## MULTI-PURPOSE TENDER LOCOMOTIVE HO.no.4111

Overall length: 160mm
A detailed scale model, Drives on all four wheels — one of which is fitted with traction tyres for maximum pulling. Fully working valve gear.

**$42**

NEWS FLASH!
Also 78-79 **MARKLIN** catalogues now available!

## HAG

Magnificent hand crafted models from Switzerland in HO gauge. DC or AC. On all Hag Locos, the motor block, housing and underframe are of injection die-cast zinc. They have powerful motor with geared step-up transmission. Prices range from $125 for Locos and $32.50 for coaches. Send S.A.E. 70c for catalogue etc.

## MARKLIN

We hold full range of M (metal) & K (plastic) track and overhead catenary system. New models now in stock are No. 3082 (2-8-2 loco) in HAMO No. 8382, and No. 3049 Electric Loco. Still some electric points left at $29.00 pair, and switch 7072 at $4.95. Excellent spare parts & repair service.

## MARKLIN LOCOMOTION

Update your Marklin System with a proven fully transistorised LOCOMOTION CONTROLLER especially developed for Marklin 3 rail systems. Features, Inertia Brake and Shunt. You have never experienced more realistic operation, write with S.A.E. 25c for details.

## FLEISCHMANN

Modellers across Australia buy their FLEISCHMANN — HO or N — from BILL WEBB. . . . WHY! ! ! ! ! ! ! ! ! ! BECAUSE he (1) stocks approx. 98% of the items shown in catalogue, along with their major spare parts; (2) He offers prompt, efficient and personal service by Mail, Airfreight etc., to every corner of Australia.
If you have never tried FLEISCHMANN and you want to know what makes them one of Germany's leading manufacturers, we suggest you select a model or two from the list below and judge for yourself:—

### HO Gauge

| | |
|---|---|
| No. 4000 0-4-0 Tank Loco | $30.00 |
| 4111 Illustrated above | 42.00 |
| 4203 Diesel shunter | 32.00 |
| 5001 Coach | 4.70 |
| 5056 Old time coach | 8.90 |
| 5011 Open truck | 3.60 |
| 5205 Open gondola | 7.00 |

### N Gauge

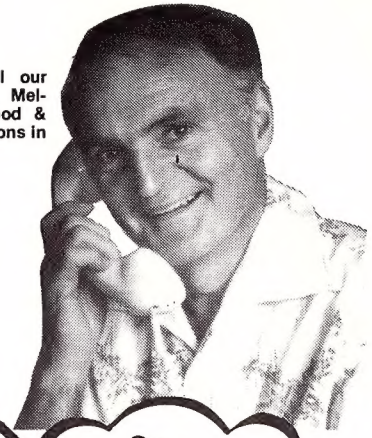
| | |
|---|---|
| No. 7000 Tank Loco — Metal body | 34.80 |
| 7218 Diesel shunter | 33.60 |
| 8051 Old time coach | 8.00 |
| 8200 Open wagon | 4.90 |

From the simple Starter Set to the fully Automatic layout,

FLEISCHMANN make it and BILL can supply it.

SPECIAL OFFER — if you mention this advertisement when ordering any of above items they will be sent POST FREE.

Signature .....
Expiry Date .....
Please debit my Bankcard account number



Hope to see all our customers at Melbourne, Chatswood & Brisbane Exhibitions in 1979.

## SEUTHE Smoke Generators

We stock a unit to suit most makes HO Locomotives whether brass or plastic. There are special units for Marklin, Hamo, Fleischmann, Liliput & Roco. Also units for houses, factories, ships. All priced at $7.30 each.

### Seuthe Accessories: for HO, O & N gauge

1. Cleaning fluid for track & locos.
2. Ultra adhesive oil.
3. 3-in-1 Track Maintenance Tool.
4. Pressure Pack Cleaning Spray.

For Brochure & price list send S.A.E. 25c.

STD FOR CHEAPER CALLS
9pm-8am super economy savings
8am-6pm normal prices
6pm-9pm cut-rates

## CATALOGUES

| | post paid |
|---|---|
| Arnold | $2.00 |
| Hag | .70 |
| Fleischmann | 2.00 |
| Hamo | .25 |
| Kibri | 1.40 |
| Marklin | 1.50 |
| Peco HO | 1.50 |
| Vollmer-78'79 | 1.45 |
| Locomotion | .25 |
| Seuthe | .25 |

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MAIL CHARGES Orders up to $15.00 add 80 cents.
Orders $15.00 to $50.00 add $1.50.
No order too small. ORDERS OVER $50.00 POST FREE.
If you require goods by Airmail, C.O.D. or Registered, please add extra cost.
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# Bill Webb. Australia-Wide Mail Order

# BACK ISSUES GALORE!

RMS

## RAIL MAG SERVICE

**MAGAZINE STOCKS INCLUDE**

Model R'Roader 1960-77 . . $1.00 ea
Model R'Roader 1950-59 . . $1.50 ea
R'Road Mod. Craftsman . . . $1.00 ea
Trains, Railfan etc . . . . . $1.00 ea
Rail Classics . . . . . $1.50 ea
Railroad Modeller . . . . . $1.50 ea
Railway Modeller (UK) . . . . . 80¢ ea
Mod. Rly Constructor . . . . . 80¢ ea
Aust Mod. Rly Mag . . . . . 80¢ ea
*(MANY PRE 1950 MAGS POA)*

**BOUND VOLUMES**

*(Normally 12 mags per volume)*
RMC 1955-1977
MR 1948-1977
Trains 1960-1977
RR Modeller Vol 1-Vol 7
from $24 per volume
Railway Modeller (UK) 1956-1977
from $16 per volume

**PRE-READ BOOKS**

*(Many rare and hard to get titles)*
Speed Limit 20 (VR 2'6") E A Downes
Loco's of Sir Nigel Gresley
(1st edition signed) O S Nock
Cook Town Railway, J Knowles
Engine pass (NZR), D Leitch
Scale Railway Modelling Today (1944)
E D Beal

**8mm FILMS/SLIDES**

Mt Lylle (Tasmanian ABT Rack Rly)
VASS Tram, Victorian 'R' Class
Bendigo, Ballarat Trams
WA, SA, Qld, NSW Steam
*(All above Std 8)*

NSW Steam/Diesel Slides
*(Most classes covered)*

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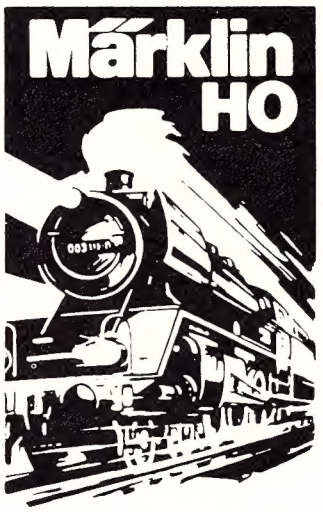
*COME VISIT US, IF WE DON'T STOCK IT, WE'LL TRY AND GET IT FOR YOU! OPEN THURSDAY NIGHTS AND SATURDAYS.*



## SEARLE'S
**ESTD. 1897**




*Full stocks of Marklin always available, also HAMO 2 rail 12v D.C. Marklin locos.*

**Mail Order Specialists**

Shop C6 Wallaceway, Chatswood, N.S.W. 2067 Phone (02) 412 4238



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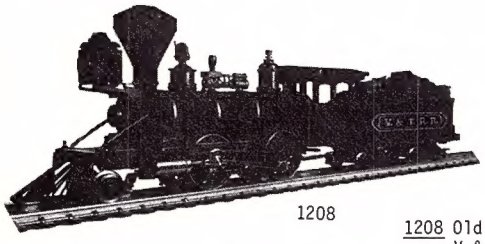
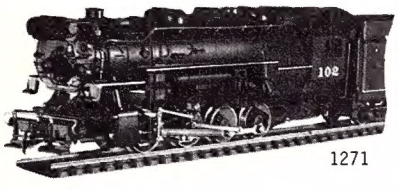
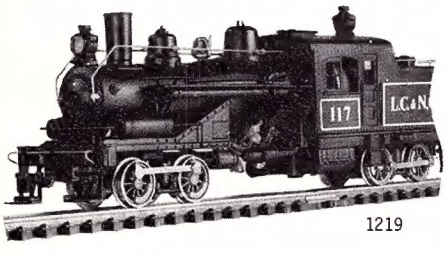
1212


1208

## HO/OO
**12v . 2 rail**


1271


1219

1208 Old timer 2-4-0 loco "J.M.Bowker" V.& T. - red with gold trim - 180mm long .. .. .. .. .. .. .. .. $39 95

1212 Old timer 4-4-0 loco "Genoa" V.& T. - black with gold fittings- 200mm long .. .. .. .. .. .. .. .. $49 75

1214 "Chippewa Hiawatha" heavy pacific of the Milwaukee Road. Operating headlight. Cab & tender painted brown and orange. 330mm . .. .. .. $69 95

1218 USRA Mikado - NYC - black with detailed Walschaert's valve gear, working headlight. 290mm .. .. .. $75 00

1219 Heisler 0-4-4-0 Articulated Loco with working headlight. 130mm . .. $92 50

1225 B.& O. 0-4-0 Switcher with slope back tender with working headlight. Silver smoke box & red cab roof. 185mm long .. .. .. .. .. .. .. .. $42 50

1271 Indiana Harbor Belt 0-8-0 Switcher with tender - new version of an old favorite. Detailed working valve gear, operating headlight. 270mm .. $69 95

1829 EMD E8 Single Unit Diesel Electric lettered for the B.& O. - lit number plates and headlight . .. .. $35 00

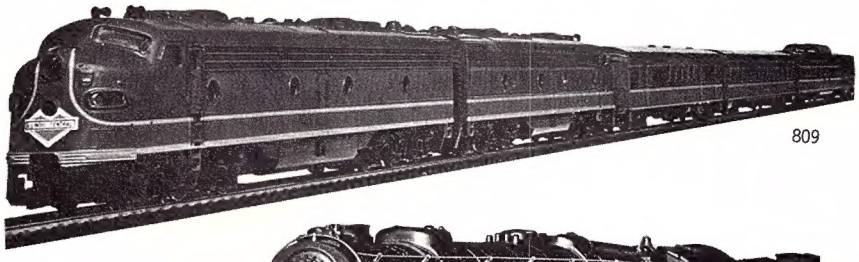
224 Set - "Afternoon Express"- Old time loco with Baggage Car, Combine, Coach and Circus Car "Barnum". Loco and cars lettered for V.& T. .. .. .. $75 00

809 "The Panama Limited" Set - Double unit EMD E8 - one powered, one unpowered, Post Office Car, Roomette, Vista Dome & Tail Car . .. .. .. .. $95 00

229 "Bonanza Freight" - Old timer V.& T. loco with five freight cars and one caboose .. .. .. .. .. .. .. .. .. $75 00

**********************************
*ALL LOCOMOTIVES ARE TESTED AND ADJUSTED TO FAIR AVERAGE QUALITY*
*STANDARD BEFORE RELEASE FOR SALE*
**********************************

*Prices shown in this advertisement are recommended prices only and there is no obligation for dealers to comply with the recommendation*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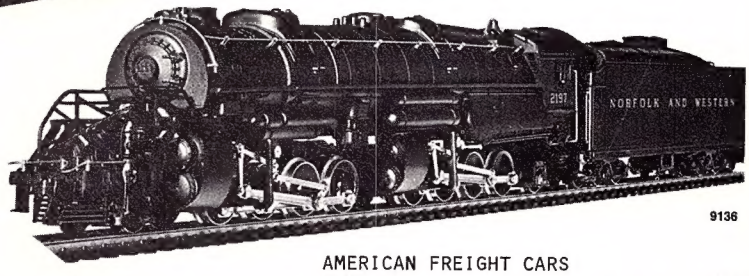
## N GAUGE


9136

9104 (4004) G.M. SW1500 Diesel Electric "Cow" lettered Union Pacific has headlight and is powered on all wheels. 94mm long .. .. .. .. .. .. .. .. $35 00

9114 (4014) G.M. SW1500 Diesel Electric "Calf" lettered Union Pacific. This model is unpowered but has working headlight. .. .. .. .. .. .. .. .. $12 50

9140 (2121) Fairbanks Morse Diesel Electric - Santa Fe. With working headlight the model is 105mm long .. .. .. .. .. .. .. .. $26 25

9134 (2112) Indiana Harbor Belt 0-8-0 Switcher with tender. Working headlight, this model is 140mm long .. .. .. .. .. .. .. .. $47 50

9136 Y6B Mallet - Articulated 2-8-8-2 loco with tender, Norfolk & Western. Working headlight, detailed working valve gear. Powered on all drivers the model is 225mm long. .. .. .. .. .. .. .. .. $87 50

9104

AMERICAN FREIGHT CARS

FLAT CARS .. .. .. .. .. .. .. .. .. .. .. $3 25
9341 (2372) Boston & Maine
9342 (2373) Great Northern
9343 (2374) R. D. G.

WOODEN BOX CARS .. .. .. .. .. .. .. .. $3 25
9345 (2361) Northern Pacific
9346 (2362) D. & R.G.W.
9347 (2363) Pennsylvania
9348 (2364) Seaboard

STANDARD BOX CARS .. .. .. .. .. .. .. $3 25
9350 (2381) Penn. Central
9351 (2382) Canadian National
9352 (2383) New Haven
9353 (23840 Pacemaker

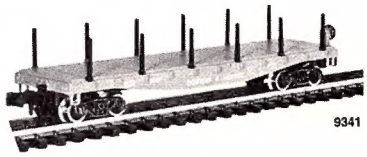
9351

AMERICAN TRAIN SETS

9007 "Chippewa-Hiawatha" Set - Pacific Loco with Pullman, Combine and Observation cars .. .. .. .. .. .. .. .. $67 50

9008 "Capitol Limited" Set - B.& O. Pacific Loco with Pullman, Combine & Observation Cars .. .. .. .. .. .. .. .. $67 50

9013 "Crescent Limited" - Southern Pacific Loco with Pullman, Combine & Observation Cars .. .. .. .. .. .. .. .. $83 75


9341

★★★★★ *from good hobby shops everywhere*

FOR TRADE AND GENERAL ENQUIRIES:-

**AUSTRALIAN MODEL CRAFT CO., 577 Dean St., Albury, N.S.W. 2640 (P.O. Box 118)**

# McBEES
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COBURG, 3058
VICTORIA

TELEPHONE (03) 478 0038

### McBEES HOBBY CENTRE

P.O. Box 144 is registered at 535 Plenty Road, Preston. Items in this ad are a selection only. Any other enquiries please write. We are a licensed secondhand dealer.

Our shop is located at:
**535 Plenty Road,**
**East Preston.**

Hours: Mon-Wed 4pm-7pm
Thurs, Fri 12 noon-9pm
Sat 9 am-1 pm.

PLEASE all Mail orders to
P.O. Box 144 COBURG 3058

### POSTAGE RATES:-

Post and packing MINIMUM $1.00
Additional charges:
On orders under $5.00 Nil.
$5.00-$14.99 extra 50¢
$15.00-$29.99 extra $1.00
$30.00-$49.99 extra $1.50
$50.00 and over Nil.
Airmail extra $3.00
Registered extra $2.50

bankcard
welcome here

*We welcome payment by BANKCARD. Please include number, expiry date and authorisation and signature.*
*For fastest service order on our order form with general enquiries on separate sheet.*

### FLOQUIL PAINTS

We have full stocks of Railway colours from this excellent range of paints.

| | |
|---|---|
| All colours 1 oz bottle | $1.30 |
| DioSol solvent 8 oz can | $2.95 |
| DioSol solvent 16 oz can | $3.90 |
| DioSol solvent 32 oz can | $5.85 |

Late March should see the arrival of our first shipment of Polly S, Floquil's water soluble range of paints in Railway colours. 1 oz bottle $1.40.

| | |
|---|---|
| Railway colours 1oz bottle | $1.40 |
| Polly S colour card | 60¢ |

### CHAMPION DECAL COMPANY

We carry a good range of Champ Decals, especially UP, SP and Santa Fe. We will order any Champ Decal set you require. Delivery is usually 3-5 weeks from date of order. Prices range from 75¢ to $1.95 (for the "Blue Ribbon" sets).

| | |
|---|---|
| CHAMP Catalogue | $1.00 |
| Champ Freight Lettering Plan Book | $4.25 |

### ATLAS HO PLASTIC KITS

| | |
|---|---|
| Lumber yard and Office | $4.55 |
| Water Tower | $3.95 |
| Signal Tower | $3.95 |
| Trackside Shanty | $2.00 |
| Refreshment Stand | $2.50 |
| 12 Telephone Poles | $1.20 |

### REVELL HO PLASTIC KITS

| | |
|---|---|
| 4 Trackside Buildings | $5.20 |
| Country SchoolHouse | $5.20 |
| Superior Bakery | $6.50 |
| Barnyard | $5.20 |
| 4 Farm Buildings | $5.20 |
| Small Town Station | $5.20 |

Watch for more items from the "value for money" Revell and Atlas range.

From **MODEL MASTERPIECES** — the "easy" Kit, simply paint and install their HO ashpit $7.85

For the more experienced modeller we have more stocks of the
**KEYSTONE** HO Danby Saw Mill $25.95

### ON THE AUSTRALIAN SCENE

The S.A.R. HO stone goods shed kit is still available at $11.95. However, production will not continue indefinitely so don't wait until it's too late. MnJ continue to improve and expand their range of Australian and U.S. decals all at $1.00 a set. Full list is available on request.

### WESTON HO PAINTED FIGURES

| | |
|---|---|
| Section Hand with Shovel | $1.75 |
| Section Hand with Pick | $1.75 |
| Section Hand with Pick and Shovel | $1.90 |
| Section Hand with Wheelbarrow | $2.15 |
| Loafer | $1.60 |
| Engineer waving | $1.60 |
| Engineer sitting | $1.60 |
| Fireman sitting | $1.60 |
| Freight Brakeman | $1.60 |
| Freight Brakeman on car top | $1.60 |
| Naked Lady | $1.45 |
| Handcar and Rider | $4.75 |
| Mrs Spumoni, Pistachio and the family wash | $5.85 |
| Old Man walking with stick | $1.75 |
| Young Man walking | $1.60 |
| Flexible Freddy | $1.60 |
| Lady 1890's | $1.60 |
| Telegrapher 1890's | $1.75 |
| Blacksmith with Anvil | $2.15 |
| Telephone Lineman | $1.60 |
| Lady's Clothes | $0.75 |
| Blacksmith | $1.60 |
| Street Sweeper with Cart | $2.75 |
| Dog Scratching | $0.65 |
| Dog Sleeping | $0.65 |
| Collie Dog | $0.65 |
| Water Pump | $1.00 |
| Pigeons | $1.45 |
| 12 Hereford Cattle | $5.15 |
| Hand Mower | $0.65 |
| Saw Horses | $0.65 |
| Ladder | $0.75 |
| Hammer and Saw | $0.55 |
| Hand Truck | $0.65 |
| 1914 Ford Truck-unpainted | $4.35 |
| 1914 Ford Roadster-unpainted | $4.35 |
| Windmill-plastic unpainted | $1.20 |
| Rowboat — plastic unpainted | $1.00 |
| 12 Oil Drums — wood unpainted | $1.20 |

We are adding more items to our range of Westons each month — if what you want is not listed above please write, we may have it by the time your letter arrives, if not we will import it for you.

### CAMPBELL SCALE MODELS

In addition to the range of windows and doors shown on the next page we have the following Campbell's Corrugated Aluminium.

| | |
|---|---|
| 7.5" × 8 HO ft high pkg (9) | $1.80 |
| 7.5" × 10 HO ft high pkg (7) | $1.80 |
| 7.5" × 12 HO ft high pkg (6) | $1.80 |

And more arriving each month.

### TRAIN MINIATURE HO

Following initial delays caused by strikes we are now receiving regular shipments of this fine line. In stock are many of the "Tobacco Road" series including Camel, Chesterfield etc at $5.20 each and a large range of breakdown and crew trains, a list of which appeared in Sept/Oct AMRM.

### CAMINO SCALE LUMBER HO

Another line, the introduction of which was delayed by strikes, is Camino HO Scale Lumber. The range is by no means complete but we are working on it. Price is $1.25 per pack. Each pack contains varying numbers of stripwood pieces according to size. ie the (HO) 12" x 14" pack contains 7 pieces, the (HO) 2" × 4" pack 14. All pieces are 12" long in dust-free plastic bags.

### KADEE HO COUPLERS

| | |
|---|---|
| No 4 All metal coupler 2 pair | $2.50 |
| No 5 Universal coupler 2 pair | $2.50 |
| No 6 Long shank coupler 2 pair | $2.50 |
| No 7 Underset Long coupler 2 pair | $2.50 |
| No 8 Medium length coupler 2 pair | $2.50 |
| No 9 As for No 5 but intended for bogie mounting 2 pair | $2.50 |
| No 711 3/4 Size for old time equipment 2 pair | $2.50 |
| No 13 Coupler test kit | $10.50 |
| No 16 is the No 6 coupler with the No 7 draft gear 2 pair | $2.50 |

(No 16 is for use on vehicles with buffers.)
We offer a 10% DISCOUNT on lots of 10 or more packets of HO Couplers.
NOTE:— Due to price increases by Kadee some of our prices have had to increase also. Prices for HO couplers remain unchanged and our Kadee prices overall are very competitive. We stock the FULL range of couplers, in fact, with one or two minor exceptions, the FULL HO KADEE Range.

### KADEE HO COUPLER ACCESSORIES

| | |
|---|---|
| No 205 Coupler Height Gauge | $3.60 |
| No 208 Truck Spacer Washers .0.5" thick | 90¢ |
| No 209 Truck Spacer Washers .010" thick | 90¢ |
| No 231 Greasem Dry Lubricant for couplers | $1.60 |
| No 235 Spring Pic Tool | $1.60 |
| No 236 Speedi Driver Cleaner | $7.35 |

### HO COUPLER CONVERSION BOLSTERS

| | |
|---|---|
| No 505 For AHM and Rivarossi 6 wheel Pass trucks | $3.10 |
| No 508 For AHM 4 wheel Pass trucks | $3.10 |

### HO UNCOUPLERS

| | |
|---|---|
| No 307 HO Magne-Electric | ea $8.25 |
| No 308 Under Track type | ea $2.50 |
| No 321 Between Rails type | pair $3.25 |
| No 334 Uncoupler Gluing Jig | ea $2.50 |

### HO TRUCKS AND WHEELS

| | |
|---|---|
| No 500 Bettendorf without couplers | pair $3.25 |
| No 501 Archbar | pair $3.25 |
| No 502 Bettendorf with couplers | pair $4.55 |
| No 503 Archbar | pair $4.55 |
| No 509 Andrews without couplers | $3.25 |
| No 510 Andrews with couplers | $4.55 |
| No 520 12 prs 33" Freight Car wheels | $4.50 |
| No 521 12 prs 36" Pass car wheels | $5.50 |

### KADEE N GAUGE

| | |
|---|---|
| No 1023 Couplers assembled 2 pair | $3.85 |

A 10% DISCOUNT applies on orders of 10 or more packets of N gauge couplers.

| | |
|---|---|
| No 1055 'N' Standards Gauge | $5.20 |
| No 1310 Perm magnet uncoupler | pair $2.85 |
| No 1039 Electro-magnet uncoupler | ea $7.75 |
| No 1000 Bettendorf bogies with couplers | pair $3.15 |
| No 1001 Bettendorf bogies without couplers | pair $2.00 |
| No 1007 Wheel, ribbed back, tapered axles | 12 pair $3.45 |
| No 1010 Archbar bogies with couplers | pair $3.15 |
| No 1011 Archbar bogies without couplers | pair $2.00 |

NEW in N from KADEE — who else?
To extend their Bettendorf and Archbar bogies KADEE have now released a Roller Bearing style bogie — so go modern in N.

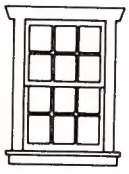
| | |
|---|---|
| No 1030 Roller Bearing bogies with couplers | pair $3.15 |

Plus a large range of coupler conversion kits for N locomotives.
Write for KADEE lists and information leaflet. Don't forget to state which gauge.

*Remember KADEE prices shown above are not "specials". They are our normal KADEE prices.*

## SCRATCHBUILDING AIDS

Scratchbuilders will delight in our fine line of detail molded plastic parts shown here. Most of these items are non-period and can be used on modern, old-western or victorian era buildings. All of these items are the finest in detail, workmanship and quality. They are all cast in white plastic with a few exceptions. Any of them can be used with the confidence that they will accentuate the beauty of your scratch-built structures.



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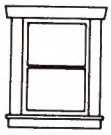

901
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902
(5/bag)

903
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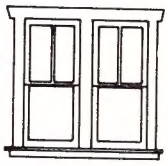

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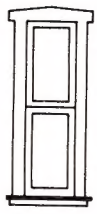
905
(4/bag)



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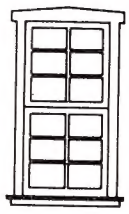

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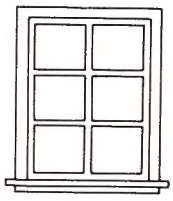

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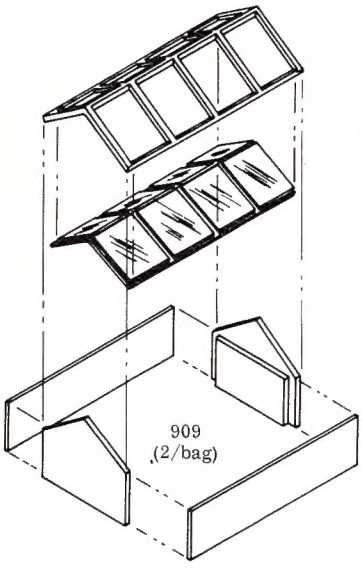

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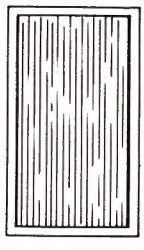

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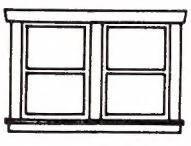

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912
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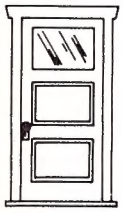

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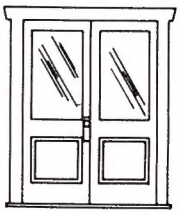

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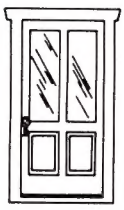

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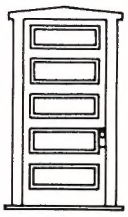

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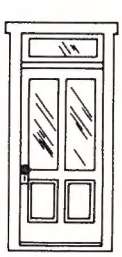

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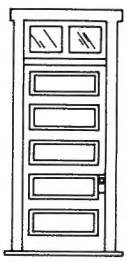
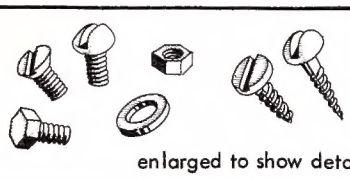


918
(2/bag)

Price $1

per Bag

*Campbell Scale Models*



enlarged to show detail

## BRASS MACHINE SCREWS

(with FLAT ends)

| length | | 3/16 | 3/8 | 1/2 |
|---|---|---|---|---|
| pcs/pkg | | 20 | 12 | 10 |
| ROUND HEAD | 00-90 | 1002 | 1005 | 1006 |
| | 0-80 | 1012 | 1015 | 1016 |
| | 1-72 | 1022 | 1025 | 1026 |
| | 2-56 | 1032 | 1035 | 1036 |
| FLAT HEAD | 00-90 | 1042 | 1045 | 1046 |
| | 0-80 | 1052 | 1055 | 1056 |
| | 1-72 | 1062 | 1065 | 1066 |
| | 2-56 | 1072 | 1075 | 1076 |
| HEX HEAD | 00-90 | 1122 | 1125 | 1126 |
| | 0-80 | 1132 | 1135 | 1136 |
| | 1-72 | 1142 | 1145 | 1146 |
| | 2-56 | 1152 | 1155 | 1156 |

## SELF TAPPING STEEL SHEET METAL SCREWS

947-1189 Pan Head #2 x 3/16" pkg(36)
947-1190 Round Head #2 x 1/4" pkg(36)

## WOOD SCREWS

(w/POINTED ends)

947-1195 Round Head #0 x 3/8" pkg(36)
947-1196 Round Head #1 x 3/8" pkg(36)
947-1197 Round Head #1 x 1/2" pkg(36)
947-1198 Round Head #2 x 3/8" pkg(36)
947-1199 Round Head #2 x 1/2" pkg(36)

(Wood screws are brass plated)

## NYLON MACHINE SCREWS

(Flat ends)

Insulating, right-handed
(Screws can be cut to shorter lengths.)
947-1163 Round Head 1-72x1/4" pkg(12)
947-1177 Round Head 2-56x5/8"
947-1188 Round Head 4-40x3/4"

947-1255 Hex Nuts 2-56 pkg(12)
947-1256 Hex Nuts 4-40

## INSULATING WASHERS

Washers, insulating pkg(48)

| No. | Size | O.D. | I.D. | Thk |
|---|---|---|---|---|
| 1275 | #5L | 11/32 | 1/8 | 1/16 |
| 1277 | #5S | 7/32 | 1/8 | .026 |
| 1278 | #6 | 3/8 | 9/64 | 1/32 |
| 1279 | #8L | 3/8 | 11/64 | 1/32 |

All $1.65 per Pkg.

# McBEES
## Hobby Centre Pty. Ltd.

MAIL ORDER SPECIALISTS

POSTAL ADDRESS:
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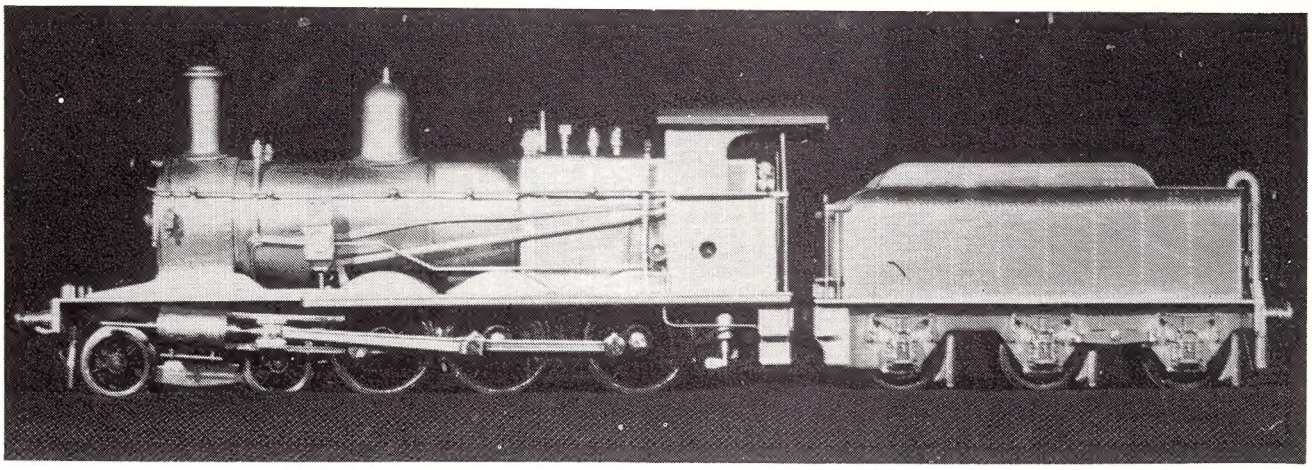
COBURG, 3058
VICTORIA

TELEPHONE (03) 478 0038

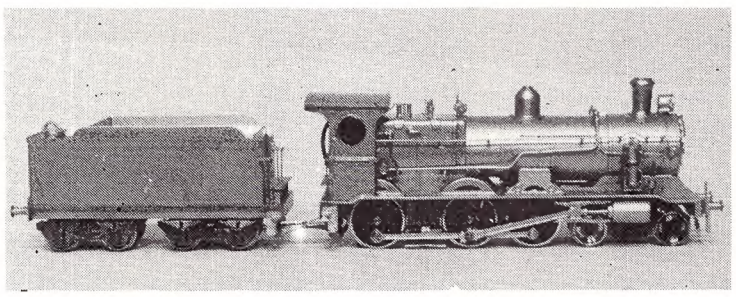
# Bergs Brass Models

P.O. Box 527
Parramatta, 2150
Ph. (02) 635 8618

## AT LAST! *THE LONG AWAITED 30T*



This superb little engine abounds with DETAILS, including the boiler backhead, with throttle, guages, etc.
An ideal loco for all layouts. NOW AVAILABLE, BE EARLY.
Limited numbers of 6 wheel tenders, also available separately.



Also to hand are further stocks of the revised C32 4-6-0, still at $235.00. Coming early in the year will be a completely new model, C30 4-6-4 tank, from the same shops as the C30T — order now to avoid disappointment, limited numbers only.

A fitting end to any train — our PHG guards van, still $57.00.
FO Suburban cars, to run behind the new C30 tank. $55.00 ea.

The 'NEW YEAR' also brings you the latest, new releases, in rollingstock from FRIEDMONT MODELS, the largest range of Australian kits available. Lists available.

MRC SCALE MODELS 'HFL' (independent terminal) car kits, two different variations per pack. $13.80 per pack.

WE NOT ONLY CATER FOR THE NSW ENTHUSIAST, BUT THE AMERICAN, EUROPEAN AND BRITISH MODELLER AS WELL — Large stocks of, Athearn, Roundhouse, Kadee, Floquil, Campbells, Marklin, Lima, Minitrix 'N', Roco, Hornby, Airfix, Peco, Mainline, K's, Wills, etc. We are first with the latest from Britain. If we don't have it, we will try to get it. Try our MAIL ORDER service, prompt replies, to all orders received. WORLD WIDE MAILING.

Dissatisfied with your old trains? Enquire about our TRADE-IN SERVICE — UPDATE NOW.

# Berg's Hobbies Pty. Ltd.

223 Church St., Parramatta,
2150.

Bankcard &
American Express
Welcomed.

# A.M.R.M.

JANUARY/FEBRUARY, 1979
Issue 94. Vol. 9 No. 1
AT ISSN 0045-009X

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# COMMENT

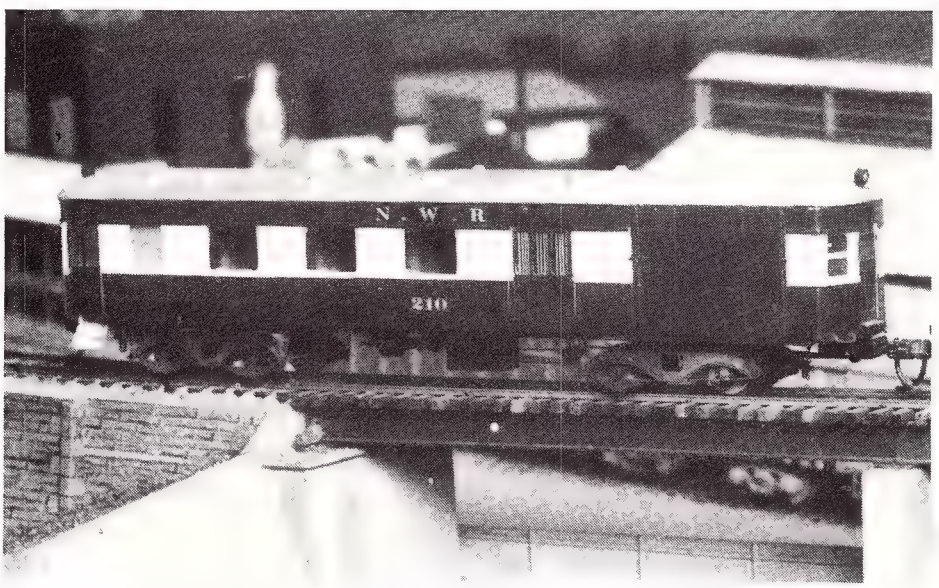
Inspiration! How does one get it? An interesting subject to try and analyse. Many have tried and many have failed. In a recent issue of an American model railroad magazine a reader, expressing his thoughts in the letters to the editor section, indicated that in his view, the editorial staff of the magazine had the responsibility of inspiring the readers. It was an interesting comment and the reasons given were sound, and no doubt most, if not all editors do attempt to inspire their readers to greater heights. In practise the task is not quite so easy for the editor has to gain an insight as to what readers do require so that the magazine may be prepared to bring to life the interest that is already in existence.

No doubt each editor has his own method of keeping in touch with the needs of the readers, but one of the most common, and the easiest is via the letters to the editor column. By gauging the comments, constructive or destructive, the editor can plan production of articles to cater for the area of need. Some readers actually supply the basis for inspiration in questions they ask but in most instances it is up to the editor and his staff to attain the necessary inspiration by his own means.

This then leads to the problem of how the editor and his staff can become inspired to seek out inspiring aspects to write about. Most of the major overseas magazines have professional staff who are paid to be inspirational but those working on the smaller magazine (like AMRM) usually work on the publication part time and very few are paid for their task. Here at AMRM as most readers are aware, we work on the editorial matter in our spare time after work. The fact that we are amateurs is in its own way a little inspiring but we, like most do at times, find it difficult finding an interesting subject to present to our readers. We are expected to supply inspiration and accept the task, but at times we fall short in our efforts. Like most modellers we need inspiration of some sort to keep us going but when we appeal for ideas via our Mailbag column, we are usually told that readers do not like writing letters.

Most perceptive readers will by now have guessed that the author of this column, and all those who opted out of writing it this issue, is lacking an inspirational subject upon which to comment. But what do we do? Leave the page blank . . . or plug on in the hope that an idea may come to mind . . . failing that this column will reach the printers to appear as a rather difficult start to a new volume.

*Bob Gallagher.*




*Bill Cole built this HO scale model of SAR Railcar 210, which has a horsebox compartment. Details of this unusual railcar trailer will be in the next issue of AMRM. Murray Billett Photo.*

*ON THE COVER: 5808 working the Down West goods in July 1957, not long before the withdrawal of the locomotive from service. Photo from the Brad Hinton collection.*

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1:160 9mm

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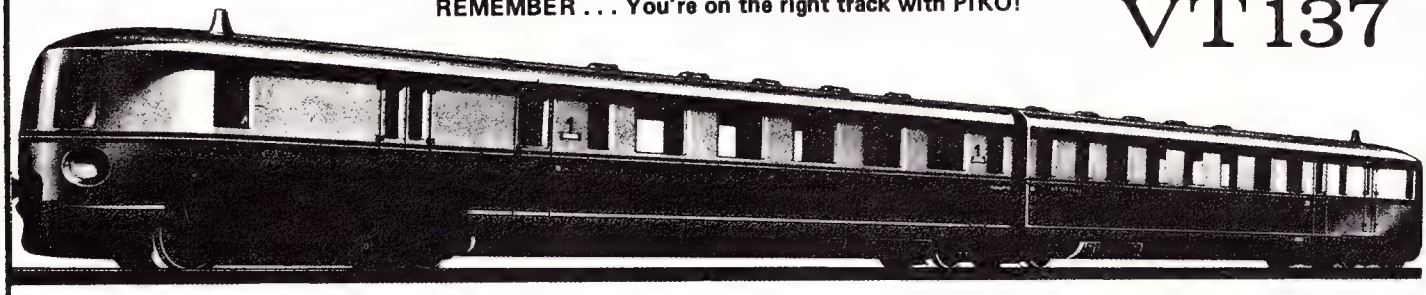

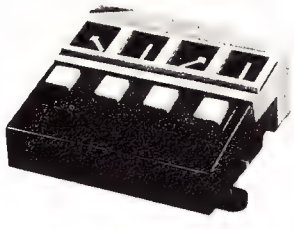

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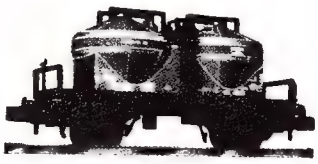

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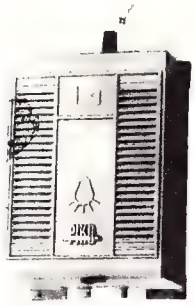
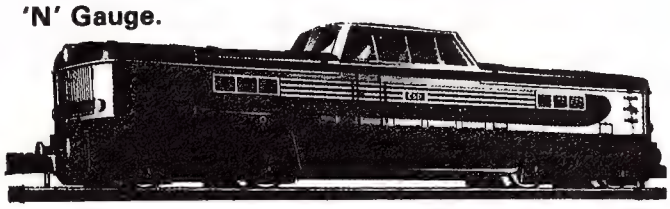


**'N' Gauge.**



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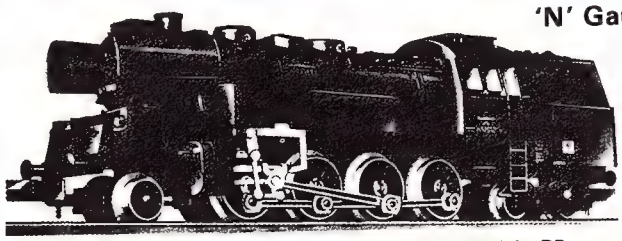

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# THE P.R.T.M.Co. TRAMWAY

**Ron Wrigglesworth describes his narrow gauge system.**

In July 1894, a new tramway was established on Wobbiegong Creek, a tributary of the Morwell River, seven miles south of Boolarra in Gippsland. Today not one trace of the tramway or the small isolated timbermilling village it serviced can be positively located and only scant records remain to piece together the history of this once prosperous tramway.

The State Railway officially reached Boolarra on the 10th April 1885, to be extended to its eventual terminus at Mirboo North by December of the same year. The official opening at Mirboo North by Mr. A.J. Agg the then Railway Commissioner, on 7th January 1886 was the culmination of some five years of agitating for a railway by the settlers of the Mirboo District.

The coming of the railway by no means solved the transportation problems of the settlers of South East Gippsland. Those located away from the railway right-of-way still had to contend with atrocious roads which the high Gippsland rainfall turned into rivers of mud, impassable for many months of the year. The haulage of timber to the railway in these months was impossible and this was the problem which faced the Power Timber and Lumber Company. The Power Company's mill was located on the headwaters of Wobbiegong Creek high in the Strezlecki Ranges and in winter was isolated from the outside world by impassable roads and often flooded creeks as well.

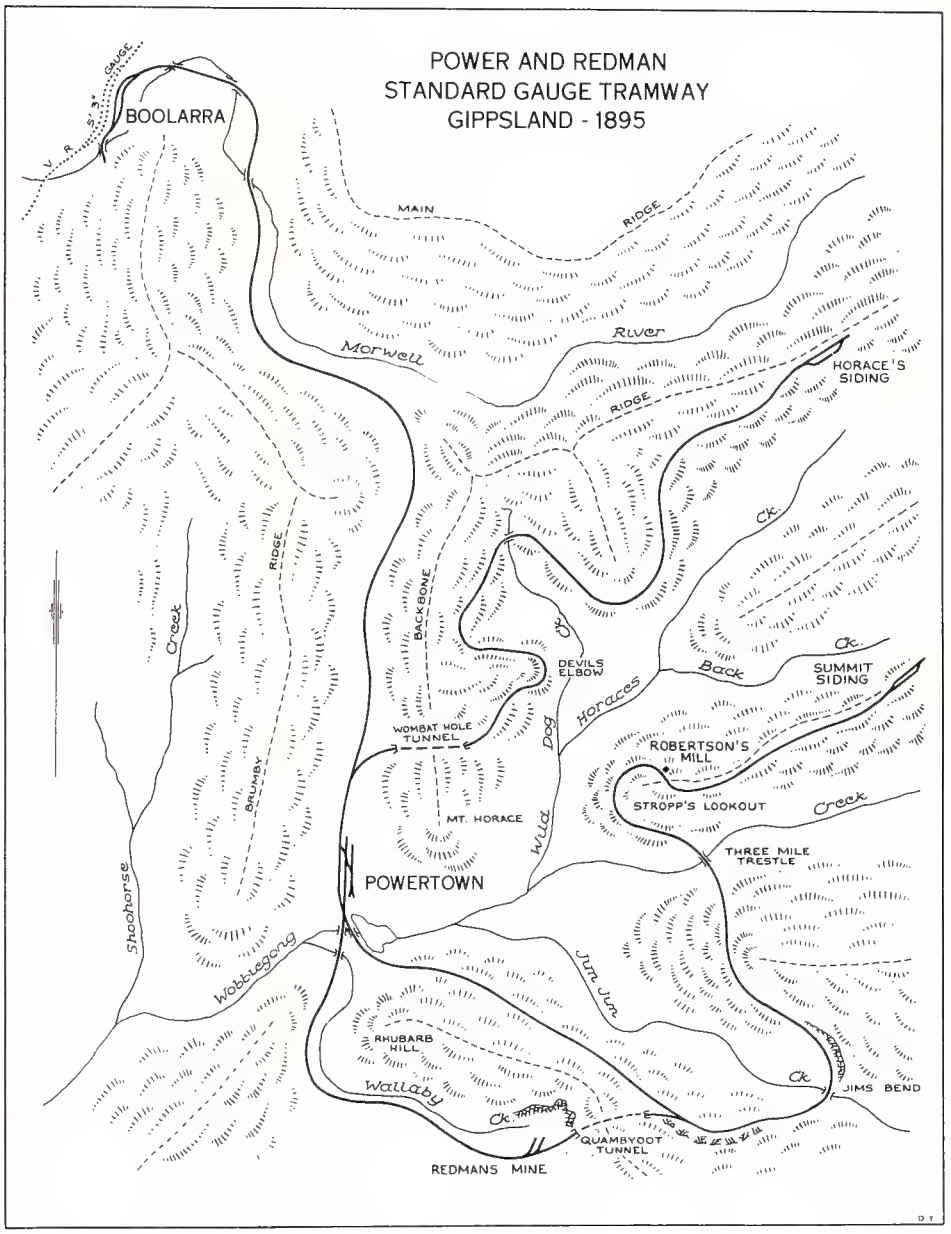
Laudehers and Skinner both constructed short horsedrawn tramways to get their timber from mill to railway. Collins formed the Yinnar Timber and Tramway Company and ran his tramway six miles from his mill to Yinnar station grounds. Why could not Power do the same?

The Power Timber and Lumber Company's leases were extensive and would last for many years yet, and surely a tramway could also be of service to the settlers between the mill and the Boolarra station grounds. So the Power Company approached Mr. R. Redman, the owner of the South Redman Mine, located at Wallaby Creek, who had similar problems trying to bring his coal to the railway at Boolarra. Power also approached the settlers whose holdings were located between the Power mill and the Boolarra station. These approaches must have proved fruitful for the Power and Redman Timber and Mining Company Pty. Ltd. was formed in July 1894. The Company was to own and operate a standard gauge tramway to serve the Power Timber and Lumber Company's timbermill, the South Redman Mine and the settlers of the Wobbiegong Valley.

The Power Company was to provide half the original working capital and be the major shareholder. Mr. Redman was to provide a quarter and a number of settlers along the proposed tramway route contributed the balance. Mr. Redman as part of the original agreement was to survey the tramway route and supervise the construction of the seven mile tramway to Boolarra and the feeder tramways which led to the Power Company's leases.

Almost as soon as the new Company was formed it had its first setback. It had been planned to purchase a German made 0-4-0 light steam locomotive, but when the new Company went to purchase the loco it had been sold. An alternative loco was purchased, an 0-6-0, and an order placed for the 0-4-0 and another 0-6-0 made by the same company.

While these negotiations were taking place track laying operations had begun at the Power Company mill to form the basis of the mill yards and to strike out into the surrounding country in two directions, south to the leases and Redman's Mine, and north to Boolarra. The southern tramway branched soon after leaving the mill yards. The southern branch




continuing to Redman's Mine, the eastern branch climbing into the ranges towards the Power Company's leases.

As Mr. Redman and his workers moved farther on into the hills his deputy was busy laying the track for the mill yards. These were completed, after a number of problems had been overcome, a week before the arrival of the locomotive from Melbourne and after being checked and serviced, it was steamed up and operations began; the date was 28th September 1894.

Track laying was now well into the hills, Mr. Redman's mine had been reached and its sidings constructed. The link with Boolarra was also completed and now both mill and coal mine had direct and reliable access to the State Railway and all within six months of starting track work.

By mid February 1895 the main tramway had reached its destination at the Summit and the horse-drawn tramways which were to feed the main tramway soon fanned out into the Power Company's leases.

Early in March 1895 an additional tramway was commenced. The 'North Tramway' left the Powertown (as the settlement around the mill had become known) yards in a northerly direction from beside the engine shed and then turned north-east towards some new Power Company leases at Horace's Creek.

Work on the north tramway was stopped on 7th April 1895 as Mr. Redman could not find a route over the Wild Dog Ridge at a suitable grade without extensive earthworks, something which up until now had been avoided by the Company. The only alternative to the earthworks seemed to be a cable operated incline which would mean isolating at least one locomotive on the far side of the ridge to work the rest of the north tramway.

As the Company was deliberating the problem one of the tramway navvies located a wombat hole not far from the temporary end of works. On exploration it was found to lead to a huge cavern inside the ridge; the ridge at this point was actually hollow. This lead to an additional alternative being available to the Company as Mr. Redman was sure he could construct a tunnel into and out of the cavern and pass right through the ridge. This later alternative was adopted and the wombat hole tunnel was an interesting feature of the north tramway.

*P.R.T.M. engine No. 1 eases a string of log trucks down the 1 in 10 of the Devil's Elbow. (The area below Horace's mill has yet to be 'sceniced'.)*

*Aerial photo of yards and engine shed before scenery was completed. (Area on right now occupied by town and station.)*

*Engine No. 3 on a works train, passes a partly completed squatter's cabin.*

Along with the wombat hole tunnel the north tramway also contained the 'Devil's Elbow', an extremely sharp bend around the end of a spur on a steep grade. A number of accidents occurred there in the span of the tramways existence although it appears no one was ever killed there.

The Power Timber and Lumber Company established a small village around its mill at Powertown, providing Company built and owned accommodation for key mill personnel and their families. It also owned and operated a general store for the benefit of its employees. The P.R.T.M. Co even built a small station platform and waiting shed at Powertown in the hope that the tramway would be some day run by the State Railways as a branch line. This was never to be and the station, small as it was, became a white elephant to the Company.

The village and the settlers who took up holdings in the Wobbiegong Valley were the life-blood of the tramway in its latter years. For once, the timber was removed from the Power leases and the need for the black coal from Redman's mine declined it was only the carriage of agricultural produce out of the valley and supplies in, that kept the tramway open.

The Company ceased operations in 1913, the last train running on the 10th March 1913. By this time Gippsland had become a thriving rural area serviced by good all-weather roads and fast road transport and the tramway was no longer needed. It had served its purpose, it had opened up the area it serviced and made it a rich district but in doing so had made itself redundant.

A meeting held in the Shire Hall at Mirboo North on 4th April 1913 dissolved the Power and Redman Timber and Mining Company Pty. Ltd.

This then was the historical background, as unlikely a blend of fact and imagination as it may seem, on which the P.R.T.M. Tramway was modelled.

## The Layout

The starting point for the P.R.T.M. Tramway was a social evening with Bob and Carol Redman at their home in mid 1974.

After dinner Bob, a keen train man, produced a large box of H0 equipment. A few minutes work with some sectional track and a simple oval layout appeared on the lounge carpet. Bob then produced from his magic box a number of early English prototype steam locomotives and these were soon negotiating the simple layout. I was in heaven, this was the best fun I had had for a long time. It was after midnight when that layout was pulled up and packed away and by that time it was too late, I had to have my own layout.

The drive home that night was full of problems; what would it cost? Where could I put it? How big should it be? Did I really need a layout? The list was endless and so was the discussion. After a number of weeks of thought on the subject, the arrival of a tax rebate cheque and a looking only visit to "The Engine Shed" at the local shopping centre brought matters to a head. I fell for the charms of Arnold Rapido's 'N' gauge 0-4-0 locomotive and decided this was what I wanted. This finalised the discussion on scale, but immediately proproduced another question for discussion. Could I with absolutely no previous experience with railwaying or model railwaying, produce a finished layout of good enough quality to justify spending the amount of money the visit to "The Engine Shed" had revealed was needed?

Bob Redman possibly feeling guilty for having started all this again reached into his magic box and produced a large pile of back copies of A.M.R.M. These I read thoroughly devouring all the valuable information they contained.

But even this produced another problem, not having any previous railway experience, how was I to learn about railway time-tables, signals, safe working and all the other railway operating procedures mentioned in those back copies of A.M.R.M. to enable this model empire I was planning to run smoothly. My solution was simple . . . . . don't.

The planned railway suddenly became a standard gauge tramway which pleased me because now I could run those little engines I liked so much. It also meant I could run the layout any way I pleased and still be prototypical.

Now began another session of research, this time into tramways and again Bob came to the rescue with back copies of L.R.R.S.A. publications. The information these magazines contained was soon devoured and it was full steam ahead on layout design.

By now it had been decided that if I moved out of my study and into the garage, I could take the vacated room and call it the train room. The layout now had a home and this also provided a solution as to what size the layout would be. The train room is only 3.4 metres long by 2.2 metres wide. A layout size of 2.15 metres by 1 metre was decided on so as to locate the layout along the end wall.

Deciding on design criteria was simple because the layout was to be a timber tramway and the only locomotives to run on it would be 0-4-0's and 0-6-0's. Rolling stock would be limited to four wheel log trucks and all other rolling stock would be limited to a prototype length of 3 metres. The criteria adopted is set out below ....

Period of operation . . . . . Turn of century
Standard curve . . . . . 200 mm radius
Minimum curve . . . . . 150 mm radius
Points. . . . . Peco 230 mm rad.
Track . . . . . Peco flexible N/S rail
Loco's and rolling stock . . . . . Steam/Vintage

Being a draughtsman by profession producing track plans to fit the layout size was no problem; deciding which one to use was the problem. Each new day saw a new layout design or a new alteration to an existing one. As the number of designs and amended designs increased my enthusiasm for the project decreased. Just when I was about to call the whole idea off I came up with my best design (I think so anyway).

It was about this time that the tramway obtained its name. Originally Bob Redman was to be included in the layout as another timber-miller but a trip on the Vintage Train to Korumburra's Coal Creek Museum added a new dimension to the layout; not only did it give it a location but by changing Bob to a coalminer added another interest to the tramway. Thus the Power and Redman Timber and Mining Company Pty. Ltd. was formed; not exactly prototypical but close enough for my purposes. It was at this time that the preceeding history was developed, to be added to as the tramway progressed.

Having overcome all the preliminary problems of planning the layout it only remained to build it. Construction began about two months after that fateful night at the Redmans.

Particle board 2100 x 1000 x 10 mm thick was used as a base and this was reinforced with 25 x 50 mm dressed pine; the particle board was to form a smooth underside so the front of the base was topped with particle board to a depth of 500 mm to form a solid base for the construction of Powertown. The elevated track was laid on Masonite which was used soft side up. The elevated track-base was cut to shape from sheets of Masonite and laid on risers made from 25 x 50 mm pine offcuts. Both these materials received track spikes easily and the construction was relatively simple. Peco's nickel silver/wooden sleeper flexible track was laid directly onto the track-base and spiked. The track plan was broken into six blocks and the layout wired such that twin cab control could be added later.

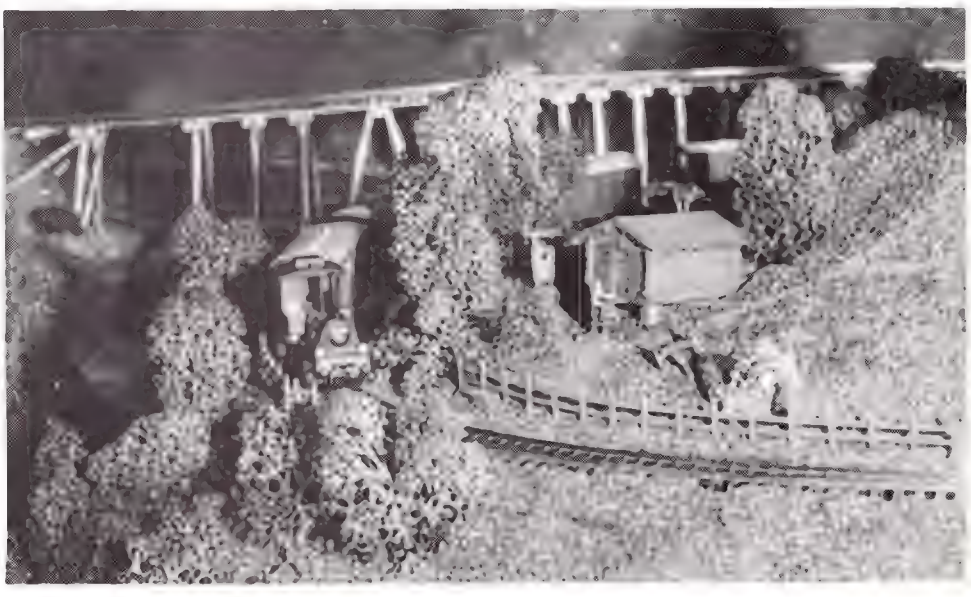
Grades were set by eye during construction to provide adequate clearance at overpasses and to simulate mountainous terrain. Once trains were running only one change was required; a severe change in grade near the 'Summit' had gone unnoticed and the little engines just could not make it. The offending riser was shortened by 15 mm and the problem was solved. Only recently the grades were measured using a simple gadget I made myself and the common grade was found to be 6%, the maximum is 10% at 'The Devil's Elbow'.

Terrain was added using fibreglass fly-wire as a base. This proved to be an excellent medium to work with as it is easily formed into any shape required and as it is soft does

*Engine No. 1 and a load of timber emerge from the forest on their way to the Powertown mill.*

*The morning 'Pass.' hauled by No. 2 enters the yards from the 'North Tramway'.*

*Engine No. 2 of the P.R.T.M. Tramway hauls the dawn mixed past Robertson's homestead as he returns from the little house.*



not scratch as the wire product does. Scrap plastic, old dry cleaning bags, etc were used to give the fly-wire some body and it was then covered in a 5 mm thick coating of Selley's Polyfilla used undyed. After the Polyfilla had set the plastic packing was removed and used in another location. The Polyfilla was mixed in batches in an old one gallon plastic ice cream container and just slapped onto the fibreglass forms and let set. I did not bother to work the surface other than to smooth off any peaks the spatula had left, because I was going to cover the whole surface with vegatation. The Polyfilla gave a good finished surface to the mountains and valleys and although it may not be as strong as the American's 'magic' Hydrocal it was solid enough to lean on during further construction stages. The final texture of the Polyfilla can be varied by mixing sawdust with the plaster before adding the water; I used this method when changing the Redman mine area and the final texture was very pleasing.

Trains had been running successfully on the layout since the track work had been completed, but now having added the terrain I had created a major problem. Trains still ran successfully, having removed the odd encroaching rock formation, but now the hollow mountains and enclosed base-board acted as a huge echo chamber producing the most un-prototypical sounds from the little engines.

After many hours of thought the noise level was reduced by removing the front 400 mm of the lower base-board. This lowered the noise to a level I will have to live with as I can see nothing else to do about it save relaying all the track on an insulating underlay.

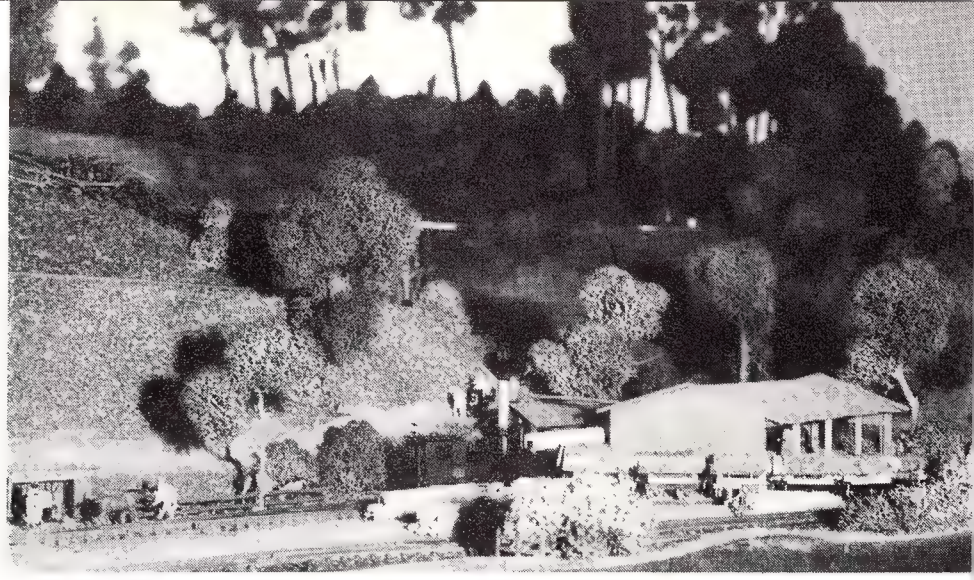
Having now created a huge 'snow' scene it only remains to convert it to something resembling the Gippsland mountains. Matt finish plastic paint was used to paint the terrain using a number of shades of brown to vary the soil tonings. This was then painted with P.V.A. white glue and a blend of green and brown dyed sawdust sprinkled over to form a carpet simulating grass, etc. Using this sawdust carpet as a base, bushes, trees and tree stumps were added in small sections, in taking many nights to fully scenic a small area. Changes requiring alterations to the terrain are simple and any white plaster so exposed is simply coloured with more matt paint and sceniced as required.

Water for the layout's creeks and pondage was created using Polyurethane full gloss clear varnish, the cheapest brand I could find. My first attempt at filling the mill pond with 'water' wasted a full pint can of varnish. Polyfilla and particle board are difficult to seal and before I had realised what was happening most of the varnish had been absorbed by these two mediums. My next attempt was more successful and the layout waterways now contain 'water'. The capillary action of the varnish was overcome by applying a number of thin finishing coats to the water surface.

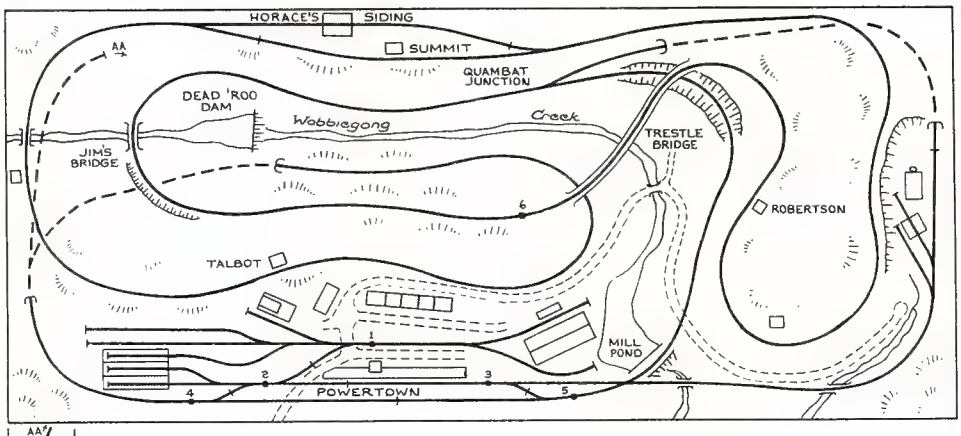
Most of the structures on the layout I have built myself from scale size timber after constructing cardboard mock-ups to check size and appearance on the scenery. Prototypes for the structures are either buildings I have seen on my travels around Victoria or are taken from photographs published in railway magazines. Plastic building kits have been kept to a minimum mainly because most kits available are based on European prototype and do not fit into period of operations.

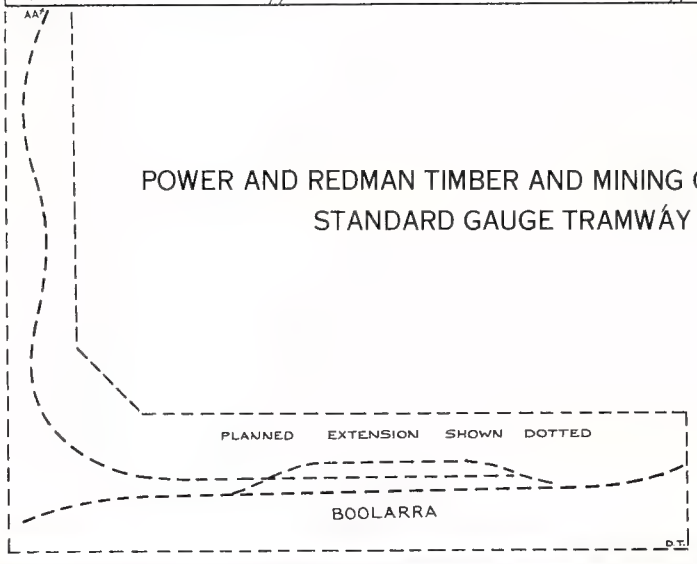
Like most model railways the P.R.T.M. tramway will probably never be finished; there will always be room for an improvement of some kind and even at this early stage in its existance an extension of the tramway is being planned to provide a visible link with the V.R. at Boolarra.

The planning and construction of our model tramway (railway?) and the research we have undertaken to provide background information has been most enjoyable and I have made many new friends in the process. The knowledge obtained from the Australasian Model Railroad Magazine and also the publications of other Australian Railway and Tramway Magazines, has been invaluable to me and to the people who write the articles for these periodicals and those who publish them; *Many thanks for your help.*



*Powertown timber mill and lumber drying yards.*



*Interior of Powertown timber mill. Saws from a broken travelling clock.*

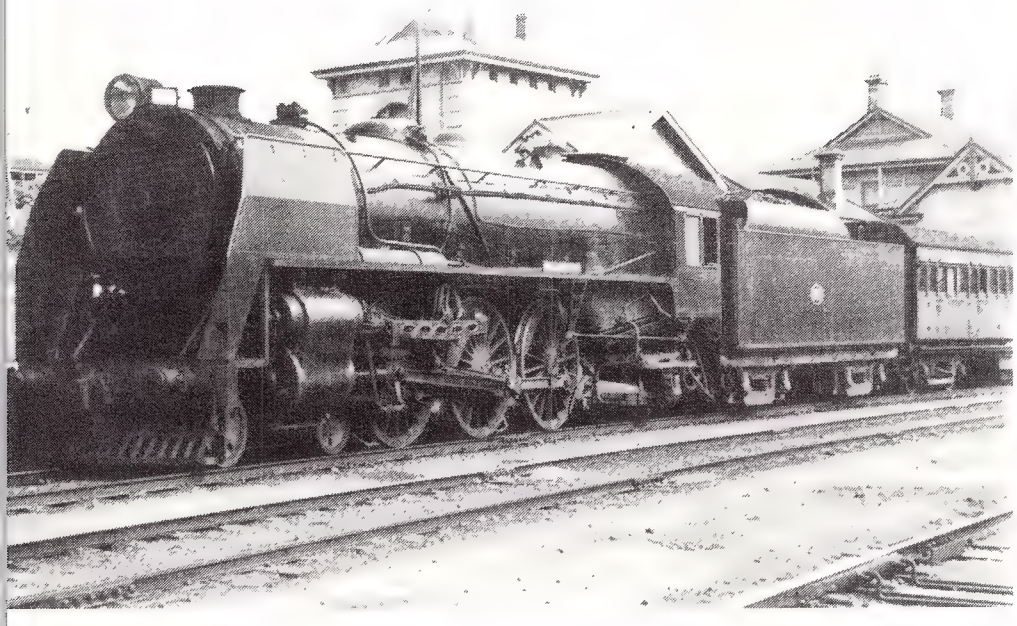
*In 1942 engine 609 was fitted with a 215 lbs. pressure boiler and this photo shows the impressive paint scheme it received afterwards. Black with red lining and buffer beams, white tyres and numbers.*

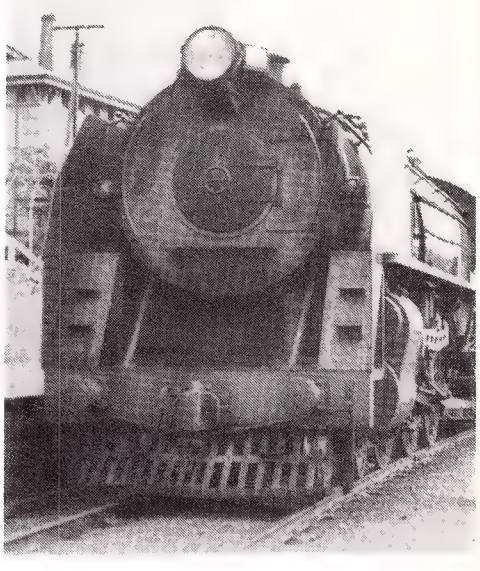
# THE 600 Class PACIFICS OF THE S.A.R.

**Text by Phil Curnow** **Plan by Bob Yule**

In the early 1920s the SAR relied on a fleet of Rx class (4-6-0) and S and Q classes (4-4-0) to haul its passenger and goods trains. The Melbourne Express (later renamed The Overland) was hauled through the Mount Lofty Ranges by two Rx class with a third pushing at the rear when the load reached eight cars. In 1922 Mr. W.A. Webb came from the Missouri, Kansas and Texas Railroad and commenced his duties as Railways Commissioner. Rehabilitation of the SAR was his goal and one of the first tasks was to re-equip the motive power roster and update the rolling stock.

Locomotive designs were prepared for 4-8-2, 2-8-2 and 4-6-2 type engines and in 1923 orders were placed with the Sir W.G. Armstrong Whitworth and Co. of England for the supply





*Prior to reboilering 609 had a flared funnel, modified buffers and a high mounted headlight. The funnel had been replaced by 1936. These photos were taken at Murray Bridge in the early 1930s and are from the Colquhoun collection.*

*In the late 1940s, 609 was distinguished from others in its class when the front of the smoke box was painted silver. In 1952 Doug Colquhoun found 609 preparing to leave Tailem Bend with a goods train bound for Serviceton.*

of ten locomotives of each type which became the 500, 700 and 600 classes respectively. To the end of steam locomotive construction the 500 remained the largest non articulated engine built in England. Coming from an American railroad it is not surprising that Webb chose engines that represented typical American steam locomotive practice of that period.

Eight 600 class locomotives in knocked down form arrived in Adelaide in March 1926 with the last two arriving in June 1926. Trial runs of the 600s began in June 1926 and within a few months most of the initial problems with springing and axle box clearances had been overcome. The 500 class were intended to haul the Melbourne Express over the South line to Tailem Bend with the 600 class then doing the high speed run to Serviceton where the train was handed over to the Victorian Railways. However 602 was the first Webb engine to haul this train on 24/8/26.

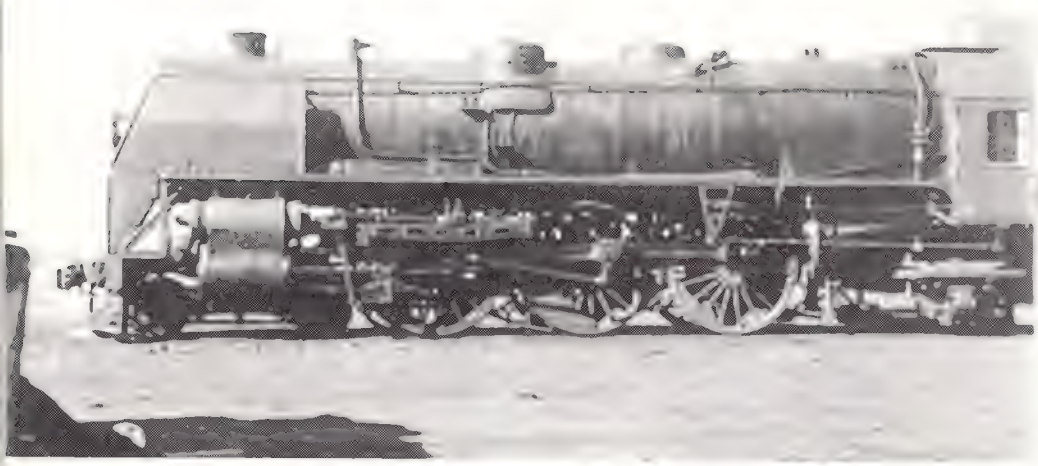
Due to their 23¼ ton axle load they were not used on Terowie line passenger trains during the 1930s although they were regularly rostered on the produce train which carried perishables bound for Broken Hill. Instead they worked mostly on the Serviceton and Victor Harbour lines. In post war years the Port Pirie line (completed in 1937) and the Terowie line were upgraded and could take the pounding of a 600 at 60 mph with 70 mph allowed between Red Hill and Port Pirie (from 1944 until 1961). By this time the lighter 620 and 520 classes had been introduced and worked most of the trains on these lines. The 600s were grouped at Tailem Bend to work most trains to Serviceton and passenger trains to Mount Gambier after the gauge widening project was completed.

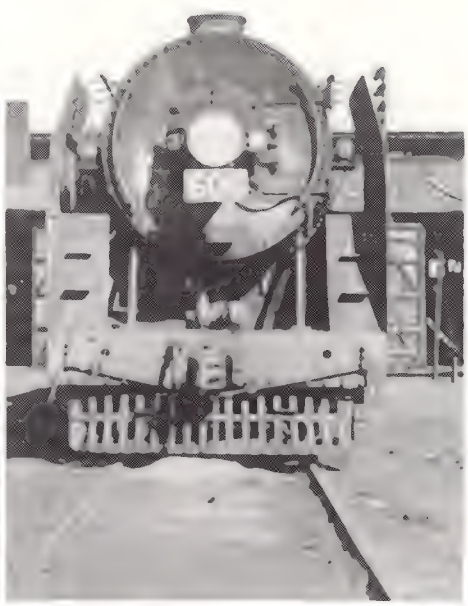
The arrival of the 900 class diesel electrics in 1952 reduced the use of 600s on passenger trains then the introduction of the 930 class diesels sealed their fate. Far too heavy for branch lines the 600 class were the first Webb class to be withdrawn and the last 600 was cut up in 1963.

**Modifications and Proposed Alterations to the Class**

The numerous internal modications are deemed to be beyond the scope of this article and interested readers are referred to the excellent book '600' produced by the S.A. Division of the Australian Railway Historical Society. As modellers we are perhaps more interested in visible changes.

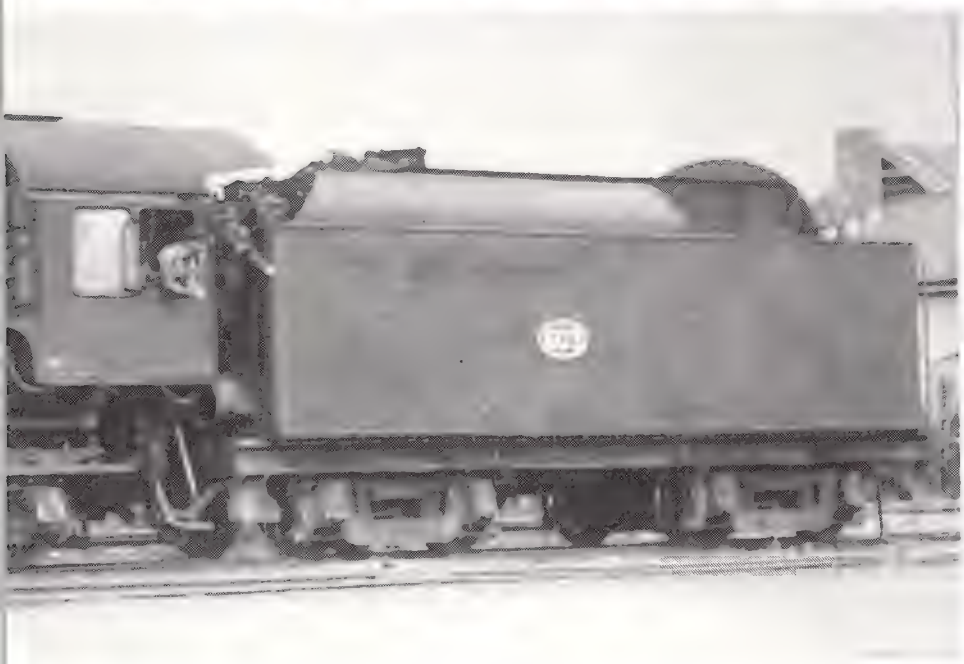
The engines were all delivered with small sand domes and a single stage air compressor.





*Top and left: Detail views of 606 at the rear of Tailem Bend roundhouse in the late 1950s. Photos by Phil Butler. Note the large style sand dome.*

*In a classic view of the breed Doug Colquhoun photographed 603 as it accellerated the typical mixture of carriages forming the down South East passenger away from Tailem Bend in July 1955. The rerailing jack that was often carried on these engines is visible to the right of the generator.*



*The oil tank fitted in the tender of 603 when the engine was equipped for coal-oil firing — from a Doug Colquhoun photo.*

*Cab detail that the driver had to work with as photographed by Doug Colquhoun.*

*Oiling the motion of 608 gives an impression of the size of these engines. The EIIR emblem on the step sets the date around the time of the 1954 visit of the Queen to South Australia. Photo by Ron Stewien.*

They were fitted after 1935 with a speed control drive shaft below the left hand (driver's side) of the cab and driven by an arm attached to the connecting rod. At first the support for this shaft was merely a strap arrangement but it was then changed to a more robust triangular shaped bracket mounted below the running plate. Following changes to the other Webb class engines 605 and 606 were both fitted in 1928 with a much larger sand dome that had two loading hatches. The others retained their small sand domes until scrapping. In 1928 engine 609 was the first of its class to be fitted with an automatic staff exchanger which required modifications to the lower rear corner of the fireman's side of the cab. When this installation proved satisfactory the other 600s were also equipped.

From 1939 until 1944 the class was fitted with 215 lbs per square inch boilers which increased the tractive effort to 39,300 lbs. Prior to this the generator had been carried high on the boiler ahead of the fireman's windows. Probably due to a reduction in clearances after reboilering the generator was moved onto the front buffer section below the smoke box. Photos show that various tool boxes and rerailing jacks were also carried here on several engines. Around this time the poor visibility caused by smoke laying down over the cab was overcome with large smoke deflectors being fitted. Other changes include the shifting of the headlight from the top of the smoke box to the centre of the smokebox door. The flared top funnel was replaced by a plainer design with a small beading around the rim. The number plates were removed from the cab sides and the cab's rear windows were filled in.

In the early 1940s the buffers were removed. Originally these had been circular in shape but it appears that in the 1930s small sections had been removed from the inner edges probably to overcome bufferlocking. In 1948 the long awaited Standard HT Stokers were fitted to 602, 604, 605, 606 and 609 to save the fireman's back as he had to toil with a lower grade of coal. Another solution to this problem was the introduction of the SAR version of coal-oil firing. A steam jet atomised oil from a pool just inside the firebox door and sprayed it over the bed of burning brown coal. At various times 600, 601, 602, 603, 607 and 608 were fitted for coal oil firing which meant an extra oil tank fitted into the tender.

Because they were intended for passenger train working a single stage air compressor was fitted. As the 600s began to haul freight trains

*609 certainly had the Webb family look as shown in this pre 1928 photo. The engine had a single stage compressor which was later changed to a cross compound type although some engines kept their singles. The cab side numbers and high mounted generator ahead of the cab windows can also be seen.* *ARHS Archives — R.N. Smith.*

*Side view of 607 photographed in 1953 by Doug Colquhoun showing the cross compound compressor with muffler. The staff exchanger is fitted into the cut out in the cab sie side.*

*Trailing truck detail of 608 photographed on the scrap track at Mile End in 1959 by Kevin Kavanagh. The small plate on the lower corner of the cab side plate is the engine number.*

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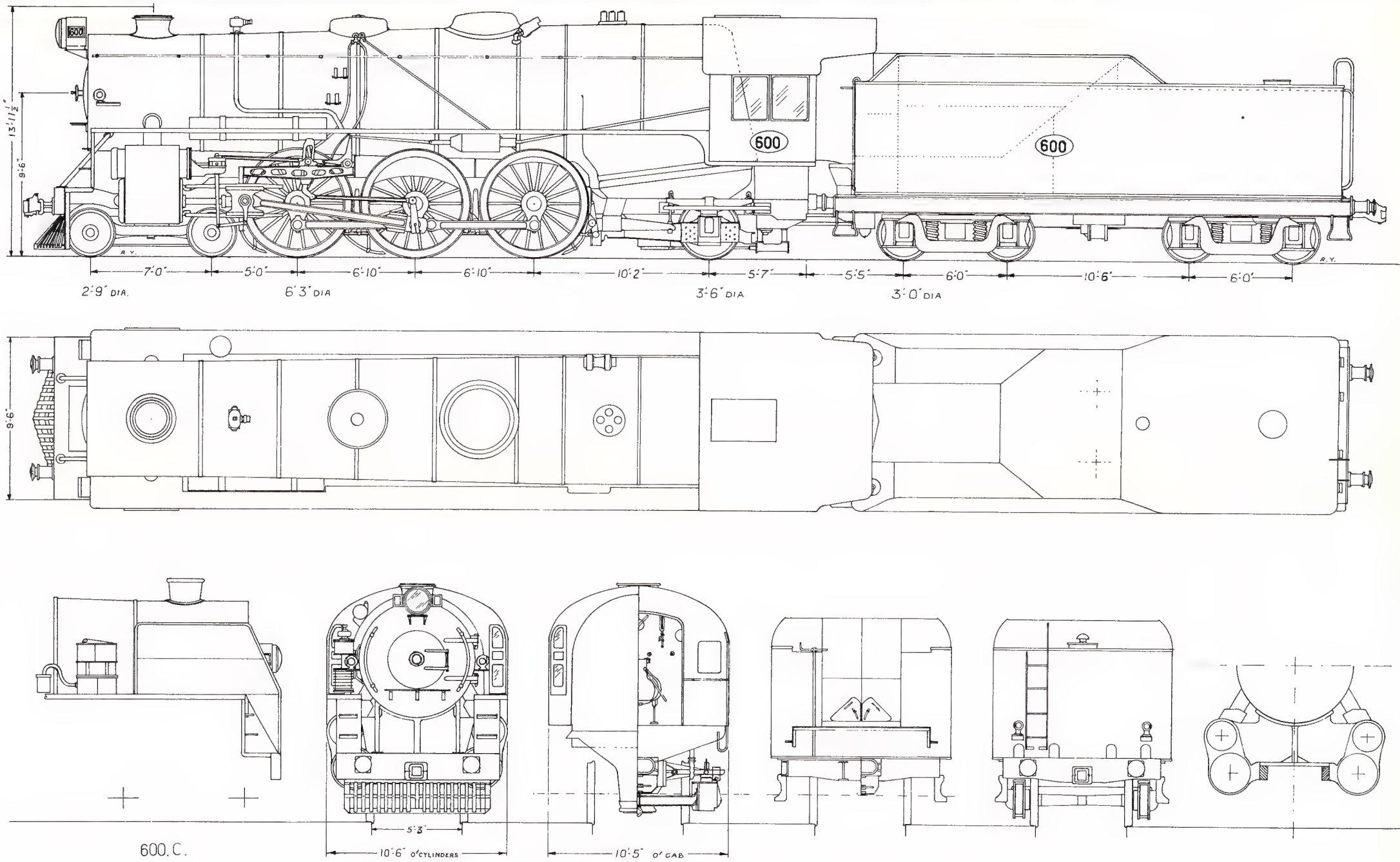
## THE PLAN

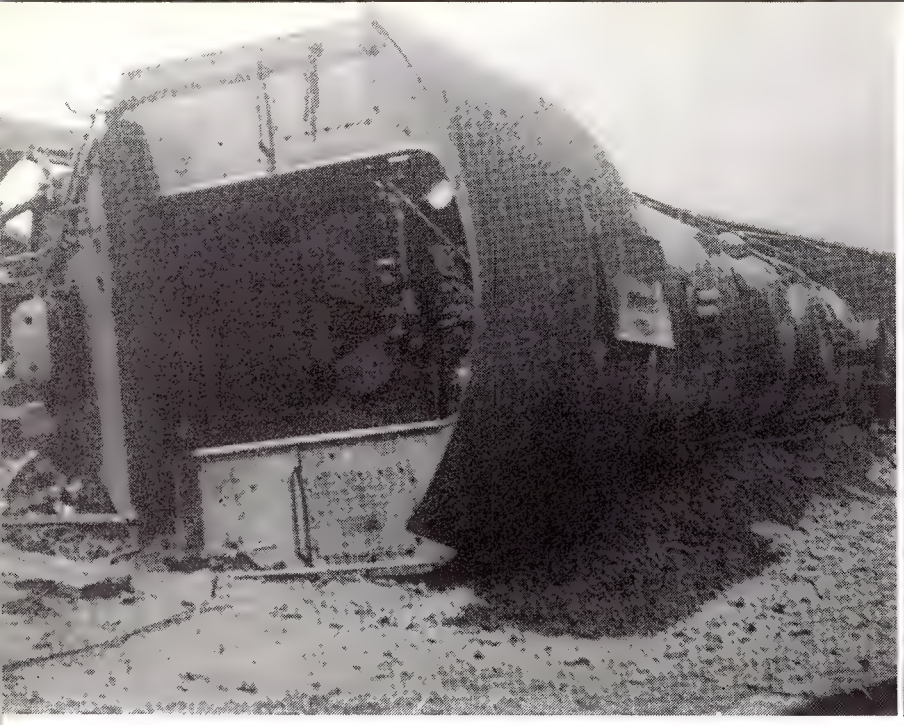
The plan of the SAR 600 class, drawn by Bob Yule is to HO scale (87.1:1), and is reprinted from the book '600' (published by the Australian Railway Historical Society, South Australian Division) with the kind permission of the publisher and the draughtsman.

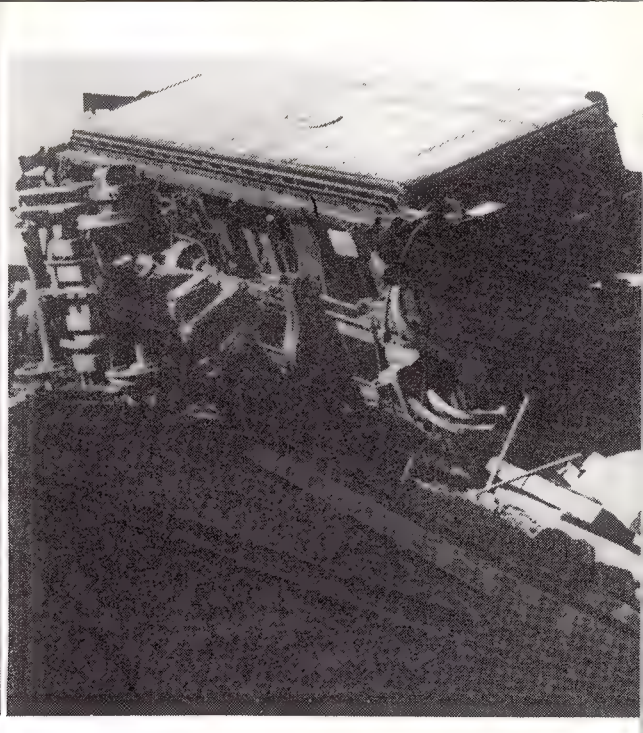
For further particulars of the ARHS — SA Division contact the secretary at PO Box 507, GPO, Adelaide 5001.

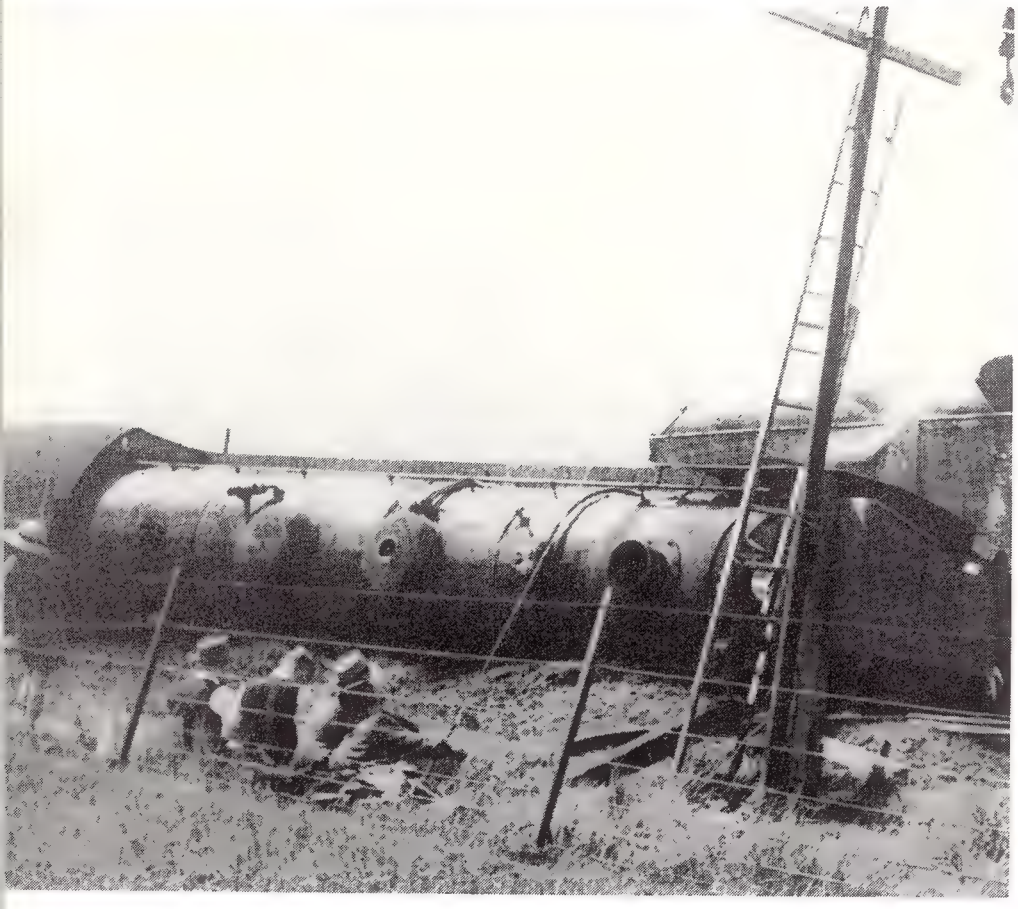



# South Australian Railways—'600' Class Locomotive

Drawn by R. Yule



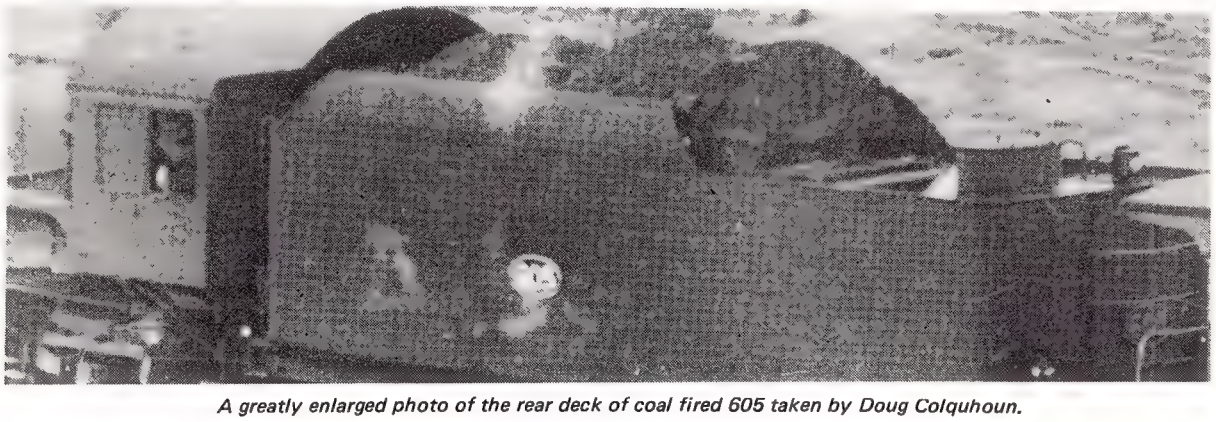




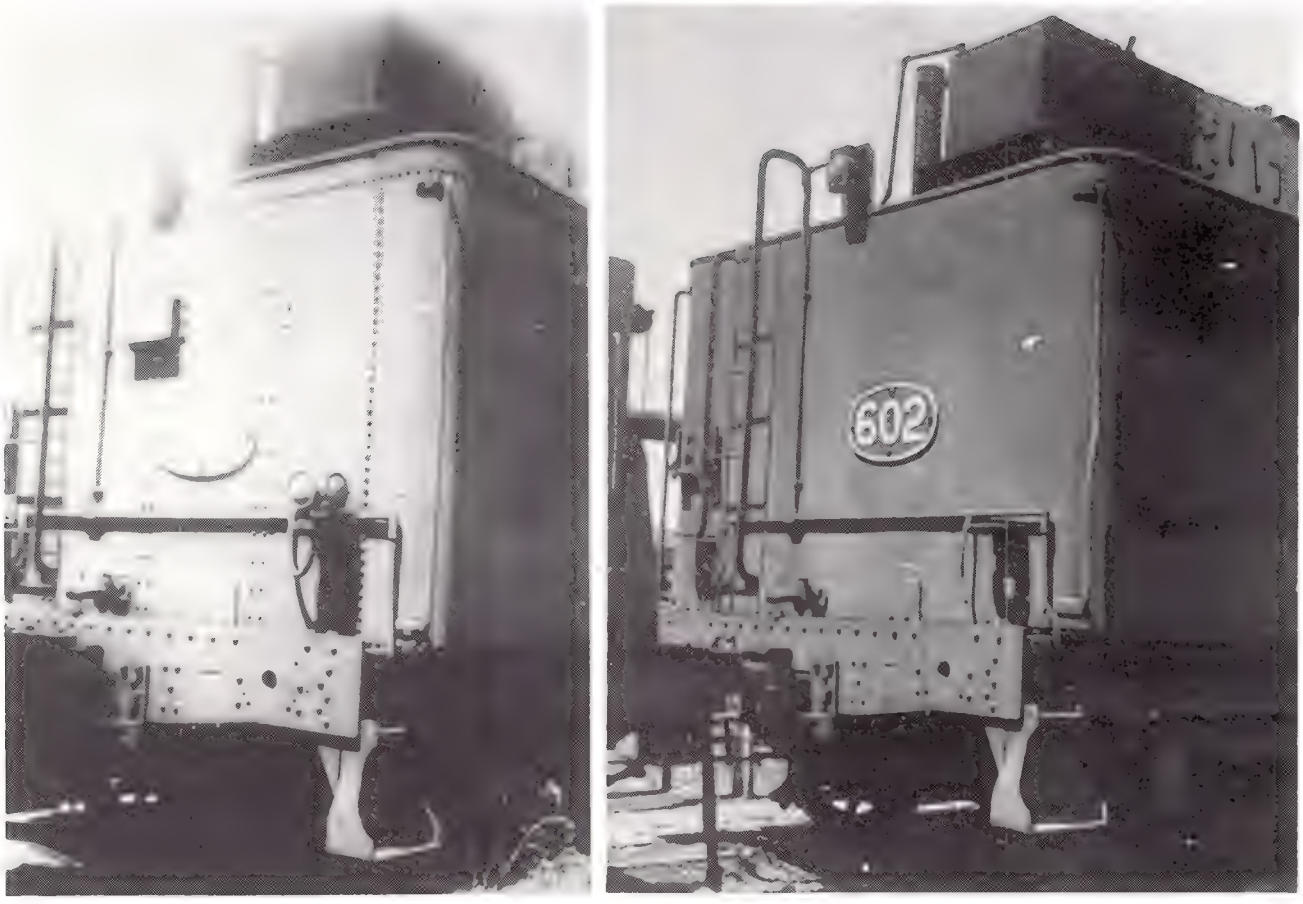
*In September 1942 engine 603 was derailed near Manoora and as a result we can see along the top of the boiler with its small sand dome, tender chassis and the rear of the cab showing the closed in windows.*

during the 1940s cross compound air compressors with a noise muffler were fitted to 601, 604, 605, 607, 608, 609. From photos taken in the 1950s it appears this project was probably not completed as 602, 603 retained their single stage pumps which had an additional small air reservoir mounted between the running plate and the top of the right hand cylinder casting.

Two proposed alterations that were never fitted pose interesting possibilities for modellers who seek a distinctive yet feasible 600. In 1928 four wheel booster trucks were ordered which would convert the class from pacifics into 4-6-4 hudsons. The axle load was too high to retain a single axle trailing truck but testing revealed that the operating speeds of a 600 through the hills with a passenger train were too high for the booster to be used effectively and the idea was scrapped. The booster trucks were later fitted to the 720 class 2-8-4 engines. Refer to the July-August 1976 issue of AMRM for details and a plan of the 720 class. Another idea that was fully researched was for the 600 to work the lightly loaded Depression Era Melbourne Express on a round trip from Adelaide to Serviceton and return. The eight wheel tender as fitted could not carry sufficient coal or water so a twelve wheel tender carrying 13 tons of coal and 10,000 gallons of water was proposed. This would have been similar to that used for the 720 class but the proposal also lapsed. All of the Webb engines were designed for easy conversion from broad to standard gauge. The wheel centres were 'dished' and to change the gauge they could be reversed in relation to the tyres. Brake hangar brackets carried two hangar positions



*A greatly enlarged photo of the rear deck of coal fired 605 taken by Doug Colquhoun.*




*As mentioned in the text tender detail has not been easy to locate. These scrap track photos taken by Kevin Kavanagh show the rivetted tender of 601 and the welded tank of 602. It appears that 605, 606, 608 and possibly 609 also had welded tenders when scrapped while the rest kept their rivetted tenders. I have seen photos of 605 with a welded tender in 1951 and a rivetted tender in 1953 so the situation is not clearly defined.*

*Rear of 608's welded tender at the Mount Gambier roundhouse in 1955. The offset number plate and lighting gear is fairly obvious. In the shadow of the shed roof some of the rear deck detail can be seen. Photo by Ron Stewien.*

with one for each gauge. Of course this was never required but in effect is what most SAR modellers in H0 scale will be doing.

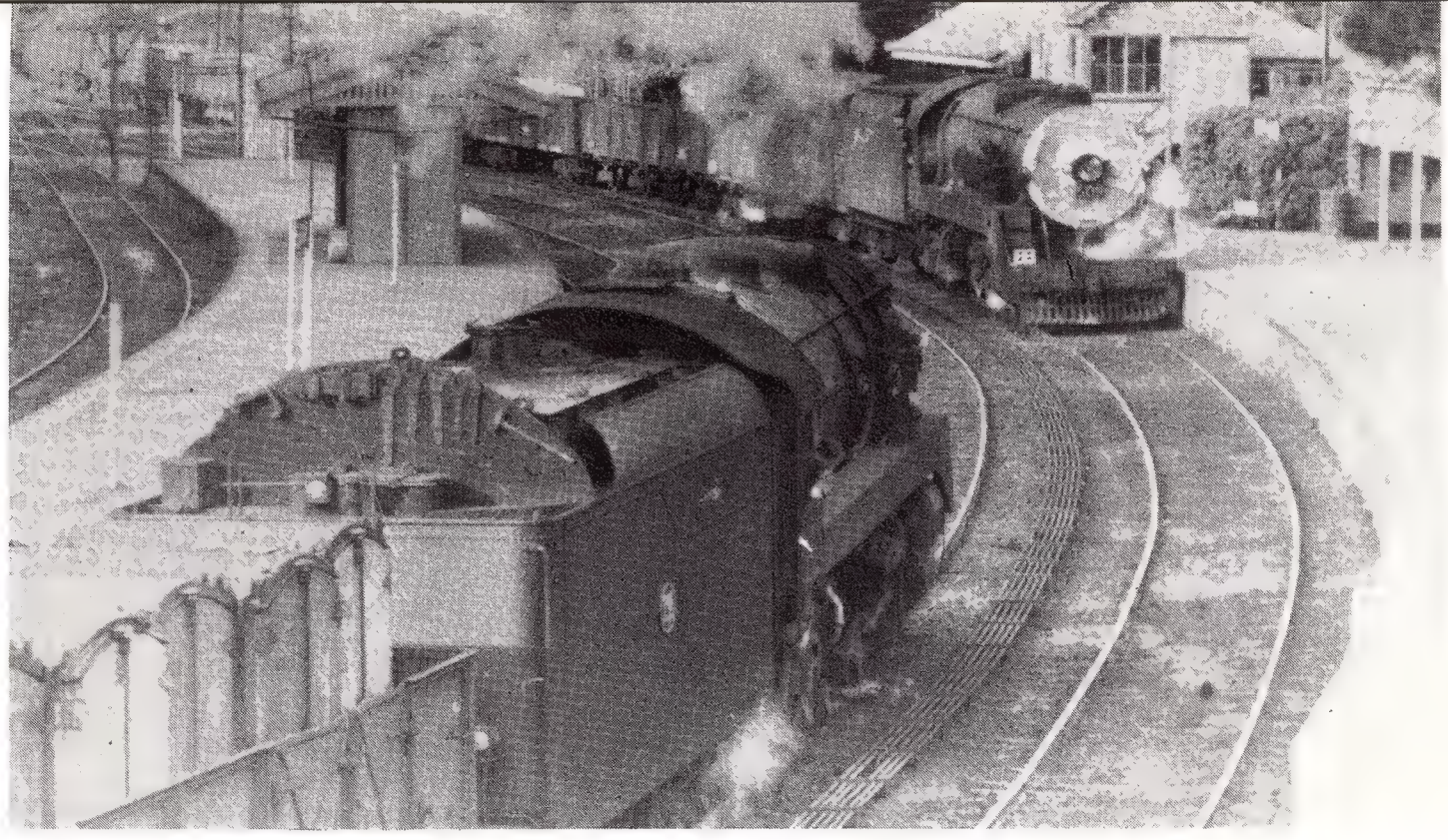
*When modelling a 600 from the plan drawn by Bob Yule remember that it was drawn after all of the engines were scrapped, Bob only had photos and the original plans to work from therefore his penmanship represents engine 600 IN ORIGINAL CONDITION. Depending on which year you choose to model you will need to add detail as noted in the text.*

**Paint Schemes**

During Webb's term as Commissioner all engines were painted black without lining. Mr. Webb had retired by the time the Duke of Gloucester travelled by rail from Perth in 1934 on his way to Melbourne for the celebration of the Centenary of the State of Victoria. Pacific 609 was selected to haul the Royal Train from Terowie to Adelaide (Port Pirie line had not been completed). Islington Works gave the 609 the basic black scheme however the engine had a vermillion buffer beam and purple lining on the engine and tender. After the visit 609 was fitted with a name plate 'Duke of Gloucester' attached to the cab side but it was later moved to the running board. This was the only member of the class to be named. The colour scheme was well received and engines continued to be painted black with red buffer beams and lining.

South Australia celebrated its Centenary in 1936 and a train of end platform cars was assembled to tour the broad gauge system. The cars were painted hawthorn green and cream and later became known as 'centenaries' which they have retained to this day. Refer to the January-February 1975 AMRM for a plan of these cars. Engine 605 was given a green livery to match the cars of the Centenary Limited. Lining out was in black and yellow while the 'Piping Shrike' (or magpie) emblem of the State was carried on the smoke box front and the sides of the tender.

The red lining was dropped from SAR engines in the 1950s but to the end of steam they retained the red buffer beams. A silver



*Although this photo is of 735 it illustrates the collection of large spanners, hammers and rerailing equipment carried on the tender of SAR steam power. Photo by Doug Colquhoun.*

smoke box front became the symbol for the 500 class which have always held the public's interest while the other classes languished in the background. In the late 1940s, 609 was the only member of its class to receive the silver treatment.

*I would like to thank Bob Burton, Murray Billett, Doug Colquhoun, Ron Stewien and Bob Yule for their assistance with the preparation of this article. The ARHS publication entitled '600' was used to set dates for the various modifications.*

*I have been unable to locate details of the type of compressor fitted to 600 and 606 during the 1950s nor have I found sufficient tender detail especially on the rear deck. If a reader can supply this information AMRM would be pleased to print it so that modellers can build more accurate models.*

## LEST WE FORGET

Most Australian towns have a war memorial situated in a park and the memorials range from a simple oblisk to soldiers and horsemen mounted on a dais.

This model of no actual memorial, combines soldiers and a horseman on a dais.

The model covers an area 120mm x 80mm x 10mm (length x width x depth of the base) made from "coolite", surrounded by "Kibri" tunnel walls cut down to 12mm high and 5 steps mounted at the entrance. The walls are topped with "Airfix" telegraph poles which have their cross-arms cut off.

From the stairs a path 15mm wide x 60mm long leads to the dais. This path and the 20mm x 20mm x 25mm high coolite dais are covered with embossed brick paper.

The 35mm x 35mm platform on the top of the dais is a piece of 2mm thick plastic covered with a random brick paper.

To complete the model the following steps were followed:

(1) Airfix soldiers and the mounted officer from the confederate army set were painted hull red and then the soldiers were positioned one at each corner of the dais under the platform. The horseman was positioned on the centre of the platform, facing the stairs.

(2) Two "Kibri" trees were planted 15mm in from the back wall on each side of the platform.

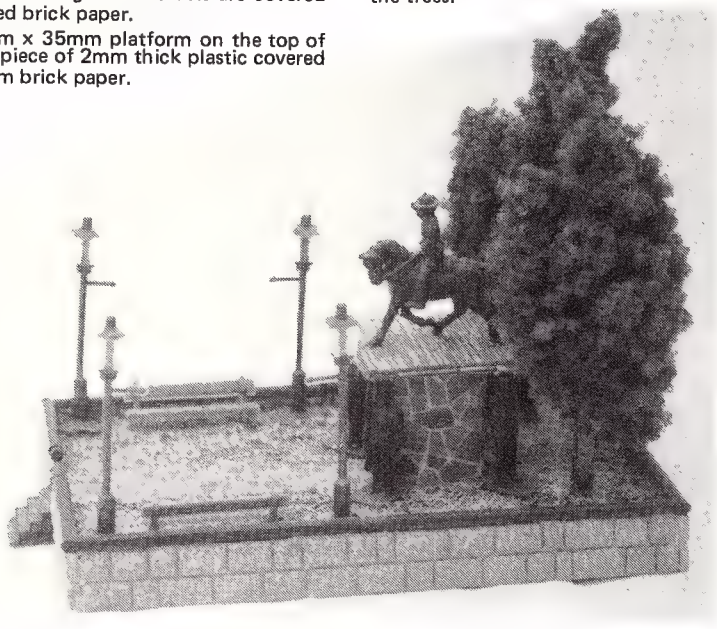
(3) Two seats were positioned 15mm in from the front wall and against the side walls.

(4) Five "Merten" lampost were installed, two on either side of the seats and one between the trees.

(5) "Herpa" light green grass was put over the base area to finalise the model.

In conslusion, I should point out that the fact that the soldiers have the right side of their hats turned up instead of the left but this is not noticeable on the model.

*Peter Kelly.*



# S.A.R. 600 CONVERSION

## Converting a U.S. light Pacific to a Sth. Australian heavy Pacific.

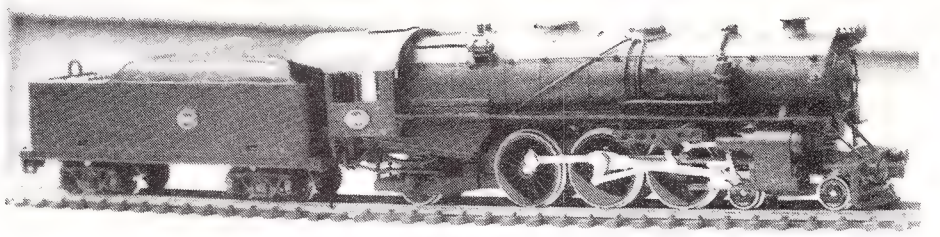
by W Pearce

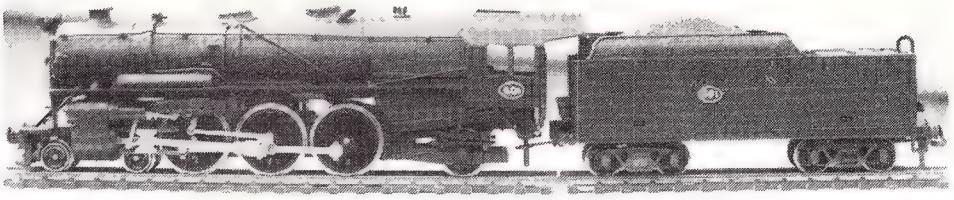
For some time I have been looking around for a H0 loco model that could be converted into a V.R. 'S' class Pacific, and when the Mehanotehnica model of the United States Railroad Administration light Pacific appeared in the shops I, at first, thought this would be ideal. I was lucky enough to have a drawing of the U.S. loco, but on comparison with the drawings of the 'S' class my hopes were dashed as there were too many points of difference.

I then remembered the large Pacific locos of the South Australian Railways, and having a copy of "600, The Pacific Locomotives of the South Australian Railways" (A.R.H.S. Sth. Aust. Division), I took this down and referred to the booklet which has an H0 plan drawing of the SAR 600 within its pages. A comparison of this drawing and the USRA loco proved most interesting.

As I am inexperienced in the loco conversion field, I didn't want to get involved with replacing wheels with others of different diameters, or changing wheel spacings or locations, and it appeared that nothing of this nature would be required. Leading bogie, coupled and trailing wheel diameters on both designs were almost identical, wheel spacings were within a few inches, wheel types were identical (solid discs on the leading bogie, spoked on the trailing truck). Other useful features noted were that both types of loco used the distinctive 'Hodges' design of trailing truck, which would have been hard for me to reproduce in model form, and their boilers were of the same general size and pitched at almost the same height. With all these points of similarity, I felt how could I go wrong, so I went out and bought one of the Mehanotehnika models.

The version of the '600' class that I hoped to produce was the original one, with flared funnel, high mounted headlight and no smoke deflectors, I had selected this version just because I thought it was a nice looking loco in that form.





*As converted the loco has a squatter look due to lowered cab and shorter boiler mountings. Steps at the front of the tender were removed and modified then replaced after the photographs were taken.*

**Disassembling the new purchase**

I put the tender aside, (this will be dealt with later), and then started to take the loco to pieces. A screw running up into the underside of the smokebox is removed, and the superstructure can then be lifted up and unhooked from a couple of lugs at the rear of the chassis. I found a couple of wires running from terminals alongside the worm gear box up into the superstructure, these are the power supply wires to the headlight. As it wasn't my intention to have a working headlight I snipped these wires, thus freeing the superstructure from the chassis. An unusual feature of the moulded superstructure is that most of the lower portion of the boiler, below the running platforms, is a separate moulding, lightly cemented in place. Careful prising with a screwdriver levered this piece out, which in turn freed the large weight from within the boiler, and also the headlight illuminating globe.

**Valve gear**

Now that I had the model in its two basic pieces, I could think more clearly about what to do next, and decided to work on the chassis section. Although no work is required on the wheels, bogie and truck, the valve gear as modelled provides a few problems. The U.S. locos had Baker valve gear, whereas the South Australian engines had Walschaerts. However, I knew that I wouldn't be able to satisfactorily rebuild the model valve gear to Walschaerts, so I decided to leave the metal parts as they were. The bottom of the Baker gear bell crank as modelled looks a bit like the bottom of a Walschaerts quadrant and most of the other links are close enough in appearance to satisfy me.

Even without doing anything to the metal parts, I felt that there would have to be some modifications to the motion frame, which is the large casting carrying the pivot of the bell crank lever, and other bits and pieces on the actual loco. On the U.S. loco this motion frame is a complex, rather solid looking casting, whereas on the local engines it appears lighter, with holes through it.

I modified the moulding in the following way. Directly above the bell crank pivot screw is a vertical lever, from the top of which a horizontal link goes backwards to the top of another vertical lever at the rear of the motion frame. Both the front vertical lever and the horizontal link were cut off completely, and the top surface of the motion frame was filed flat and level with the front cross member, but with the rear vertical lever left untouched. Then onto the outer face of the motion frame I stuck a plasti-kard strip, cut to shape and drilled and filed to represent the S.A.R. pattern of motion frame. To accommodate the head of the bell crank lever pivot screw, a cut-away must be provided in the bottom edge of this new motion frame, which have the correct appearance, should be lower down, by at least one scale foot, but this would really only need to be done if true Walschaert gear was fitted.

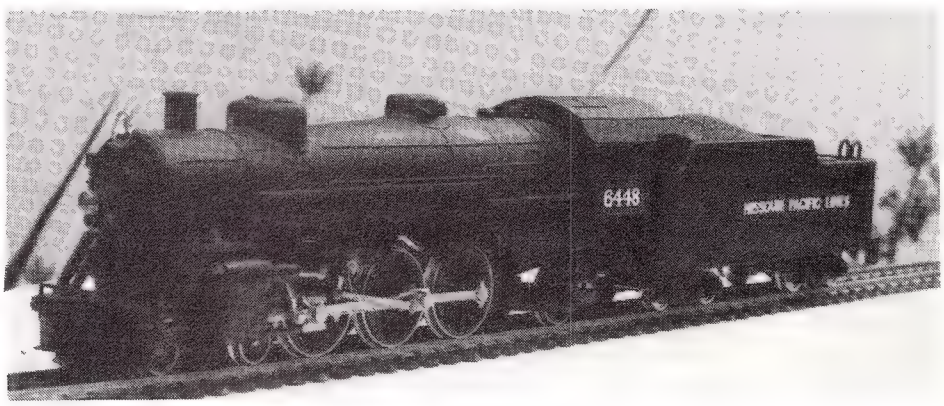
**Chassis**

Having done this to my satisfaction, I then transferred my attentions to the front of the chassis. The first thing I did here was to cut off the railing across the top of the front platform, and then the set of steps on each side of the cowcatcher, but leaving the cowcatcher in place. I then filed the front buffer beam flat, removing the poling sockets, step tops and brackets but not disturbing the knuckle coupler as supplied. I wasn't intending to have a working coupler at the front of the loco, so the non-working one was o.k.

With this all done, I then stuck a deep plastikard buffer beam, suitably cut out for the coupler, onto the front of the existing beam. A distinctive feature of South Australian steam locos was their very wide cowcatchers, so to model this feature I then stuck a couple of vertical strips of plastikard at each end of the existing cowcatcher, where the steps were, these strips were glued to the inside face of the new buffer beam. Then a narrow plastikard strip is glued horizontally across the bottom edge of the existing cowcatcher, running out across the vertical strips, and a second similar strip was stuck on about halfway up. Admittedly this second horizontal strip should be behind the cowcatcher verticals and not in front of them, but that was a bit complicated for me to try. Suitable holes were then drilled into the buffer beam and buffers fitted. Vertical strips of plastikard were glued at the outer ends of the buffer beam to give an appearance of thickness, and the angled auto coupler actuating rods were bent up from wire and glued to the front of the buffer beam. Apart from painting this completed the conversion work needed on the chassis, so I put it aside and went on to the superstructure.

**Loco superstructure**

Referring once more to the drawings, the first thing noticed is that the U.S. loco is about




*Loco as purchased. Note the high cab and boiler mountings.*

12 inches higher than the S.A. one, but as the boiler pitch height is almost the same on both engines, this enlargement is in the boiler mountings and the cab, so these will have to be cut down. Before starting any cutting, I removed the smokebox front, which can be pushed out of the smokebox by pressure from within, and put it safely aside. Examining the cab closely, I found that the roof and cab back plate were a separate moulding from the main superstructure, lightly cemented in place. Gentle pressure, starting from the bottom of the back plate and working upwards, was sufficient to get the cab roof and back plate away in one, undamaged piece. This job should be done carefully, and not rushed. Now, having removed all I could by pulling and pushing, it was time to get out the jewellers saw and needle files.

Starting from the front, I cut off the funnel and filed its stub down flush with the smokebox, and then did the same with the big sand dome. Neither of these removed pieces are of any use on the reconstructed model, so they went into the scrap box. Next to be cut was the steam dome, but as I was to re-use it, I had to be fairly careful in my cutting. Firstly I filed off the moulded on whistle on the left hand side, and then cut the top of the dome off, the saw cut being made 1/8 inch down from the top. This top is retained and the stub left on the top of the boiler is lightly filed flat, and not flushed into the curve of the boiler. The next three protrusions (safety valve, turbo-generator and steam turret) are all cut off and discarded, and their stubs filed flush.

Next comes the cab, which comprises the front plate, with attached side plates, complete with windows. Along each side plate I drew a pencil line one scale foot down from the top and ran this line across the cab front so that it followed the curve of the at present removed cab roof, and was one scale foot down from the top of the front plate at the centre. I then cut off all above this line. Cutting along the sides one goes through the existing cab window openings, this is o.k. as they have to be enlarged, so I cut away all their glazing bars and then further enlarged the opening to a size suitable for the double South Australian pattern windows. Another thing that could have been done at this time was to enlarge the lookout windows in the cab front, which on the S.A. locos extend almost down to the running plates, but I didn't do this.

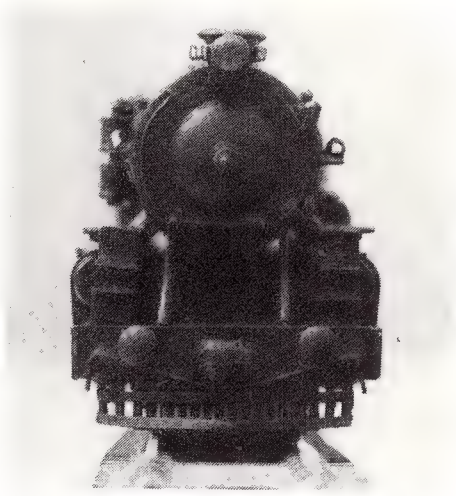
Next, I cut away all the running plates on both sides, removing also such associated pieces as the two half air reservoirs (retain for later use), the compound air compressor (discard), the power operated reversing gear actuating cylinder (retain), and front steps (discard) and all the bits of piping below these plates. However, at the front end I was careful to leave the exhaust steam pipes running up into the smokebox, and also the two running plate supporting brackets on either side of each pipe, which would be needed to carry the new running plates. Then I set to and removed all the remaining moulded-on detail on smokebox, boiler and firebox, including all traces of the original running plates.

**A point to watch**

One mistake that I made here was to retain the rivets on the sides of the firebox below the original running plates, but photos of the South Australian engines shows the boiler clading comes down over these areas, and so they should be smooth. My destruction of piping didn't extend to the bits and pieces below the cab sides, as these suit the S.A. engines. Also, after smoothing up the boiler I did the same with the cab sides, removing the U.S. running numbers and all rivet and beading details.

When this was all done, I was left with a pretty bare superstructure, whose main features was a fairsized hole where the sand dome had been. Plastikard strips were stuck inside the boiler below this hole, and the recess so formed was filled in with 'Panel-Metal'. The superstructure was then put aside whilst this filling was drying, and I went to work on the cab roof-back plate moulding, filing off all the existing moulded-on roof details (ventilators and rain strips).

On the backplate itself, there are two small rectangular slots formed, towards the bottom.



These slots receive the chassis lugs which hold the superstructure on. Now, as the roof and therefore the backplate has dropped down by a scale foot, these slots have done the same, and thus for correct re-assembly of the converted superstructure it was necessary to extend each of these slots upwards by one scale foot, which I did with the aid of a needle file. I didn't worry trying to fill in the bottom of these extended slots, but this could no doubt be done if required.

The next item I worked on was the removed smokebox front. The bell and its bracket are another separate moulding, and I was able to ease this out of its slot and discard it. The headlight and its mounting bracket were then carefully cut off and retained for re-use. Then I started work on the smokebox front itself, filing off all rivet detail, the moulded-on handrails, marker lights, the dogs and hinges on the inner, domed smokebox door and the slightly raised portion between the outer edge of the smokebox front and the domed door. After all this filing I was left with a plain smokebox front plate, with a plain domed centre. Compared with the correct S.A.R. smokebox door, this domed centre was a bit large, but as I wasn't sure that I could get a suitable sized separate door, I decided to make do with what I had produced.

**Reconstruction**

By now the 'Panel-Metal' filling on the boiler was well set, so I filed and sandpapered it down to the correct curve to match with the existing boiler, and when this was done I attached boiler bands, using gummed paper tape cut to width. I had temporarily put back the detachable lower section of the boiler at this stage, so that I would be able to run boiler bands on it too, matching up with those on the main boiler. Also, I marked out and drilled holes for the handrail stanchions along the boiler, these to be fitted later.

Then I began fitting the new boiler mountings. An appropriately shaped flared funnel was hard to find. The one I eventually used was from an LMS 5XP white metal kit, and although about the right height and diameter its shape is wrong. A steam dome from this same kit served as the original, small sand dome. As this dome sits on the tapered section of the boiler, I had to file it away a bit underneath so that it would sit parallel with the track and not with the boiler taper. For the steam dome I rescued the top of the original steam dome that I had cut off, and by a long slow process of rubbing it on a sheet of sandpaper I removed about a scale foot from its height, and then cemented it back onto the stub left on the boiler, cleaning up the joint afterwards. The safety valve assembly comprises a plastikard disc stuck on the firebox top, and four short lengths of copper wire glued into holes drilled through the disc and into the firebox. Note that the safety valves are arranged in a cruciform pattern, with one arm along the loco centre line, and the other at right angles.

Between the funnel and the sand dome is the top feed, which was another white metal kit piece, filed up to suit. The chime whistle, mounted on the left side of the dome running back at an angle, was from plastic sprue and copper wire. On the right hand side of the firebox is mounted the turbo-generator set, made up from a white metal buffer casting, which has its head removed, and the whole mounted on plastikard support brackets.

While these mountings were setting, I worked on the smokebox front. The existing headlight and bracket was cemented at the top of the smokebox front, covering the slot left by the removal of the bell bracket. I cut off the small vertical number board below the front of the headlight, and added number box wings, from balsa wood, to either side. The S.A.R. locos had hinges both to the small inner door and to the front plate itself, and these were build up from plastikard and wire. Then came the plastikard step across the front and the curved wire handrails at each side, and finally, and a most fiddley task, the door locking wheel and lever, more wire and plastikard.

Then it was back again to the main structure, gluing the cab roof and back plate assembly into position. A roof ventilator of plastikard was added together with a central pillar in the window openings from the same material. These openings should have a raised beading around them, but two attempts to form this with fuse wire were unsuccessful, so at the moment they are un-beaded.

**Difficulties**

The least successful part of my conversion was the running plates. Although they are actually quite simple, being just straight plates running along each side of the boiler from one end to the other. The ones I fitted were from plastikard, but I think now that metal plates would have made a better looking job. However, plastikard was used, so I'll describe the job as I did it.

The running plates were cut to shape, working from the drawings and the actual boiler before me. Note that the left hand running plate has an air reservoir mounted in (not on) it, so it must be cut away to suit. This air reservoir I made up from the two halves salvaged from beneath the original running plates and glued together. At the smokebox end the plates were carried on the brackets I had left, and I made up other plastikard brackets to support them from the boiler along its length, and at the cab front plate.

I then extended the cab side plates downwards with further plastikard pieces, and fitted the curved valance plates from the undersides of the running plates down to the cab fronts with more plastikard.

**Reassembling**

Once all of this was set, I tried the fit of the superstructure back on the chassis, by hooking the chassis lugs back into the cab back plate slots, and lowering the superstructure down. As I suspected, the thing didn't sit right at first go. The two vertical levers sticking up from the rear of the motion plates hit the undersides of the running plates before the smokebox could sit down on its saddle, but I remedied this by cutting a small amount off the tops of the levers.

The overall sit of the superstructure is controlled by the length of the slots in the cab back plate, and I also had to do a bit of fiddling here. Even now I don't think I have the superstructure sitting absolutely right, so this will have to be an area of experimentation by those who follow this conversion.

With the superstructure finally in place I fitted the two sets of steps that drop from the front ends of the running plates down onto the front platform. These were another plastikard construction that would probably have been better done in metal. It is very hard to satisfactorily brace these steps so that they will set square with the running plate, any such bracing tends to become a bit obvious. On the prototype, the steps are attached at both top and bottom, which makes them fairly rigid, but on the model they can only be attached at one end or other, to allow removal of the superstructure, so they tend to be flimsy.

At this time I also fitted the two bracing rods that run forwards and downwards from the underside of the smokebox to the top of

the front platform of the main frame. These stay rods are a conspicuous feature of the U.S. prototype, and I was a bit surprised that Mehanotehnika ommitted them. I made them from heavy copper wire, cemented into holes drilled in the smoke box, and as they are like the steps in that they are only fixed at one end they are also a bit flimsy.

Having got these bits and pieces into place, I removed the superstructure from the chassis for final detailing. Working from front to back, I fitted the distinctive 'divers helmet' marker lights — one at each side of the smoke box. The lights were made from bits of plastic sprue suitably filed, and sitting on plastikard platforms. Next was the left hand side air reservoir, which was dropped into the running plate recess. On the right hand side was fitted the air compressor, this being another spare bit from a white metal kit. Note that this compressor is only a single stage type.

The piping up both sides to the top feed was next, made from copper wire. More copper wire, of smaller diameter, was used from the sand pipes down from the sand dome. Another air reservoir, made up from a wooden dowel, was fitted beneath the right hand side running plate, and beneath the left hand plate the power reversing gear cylinder salvaged from the U.S. loco was attached. The reverse gear operating rod was represented by a piece of copper wire running down at a slight angle from the cab front to a position on the running plate somewhat to the rear of thr reversing gear cylinder. Supply and exhaust piping for the turbo-generator also was done in copper wire, while steps of plastikard were fitted on the boiler sides leading up to the sand dome from the running plate.

Now it was time to tackle the boiler handrails. Looking at photos of the 600's, it appears that the handrails do not follow the taper of the boiler, but instead run parallel with each other. This means that each handrail stanchion would have to be a different length from its neighbour along the taper section of the boiler. I felt that this was too much like hard work, so I used standard Romford handrail knobs, thus ending up with handrails that follow the boiler taper. Also, I found that when I got to the turbo-generator, the handrail was supposed to go through the brackets carrying this machine, but the simplified brackets that I had used wouldn't allow this, so the handrail had to stop at the turbo-generator and start again at the other side. However, all the handrails were finally run, and with the smokebox door pushed into place I was ready to give the superstructure its initial coat of paint.

**Tender**

Referring once more to the drawings, the size and general shape of the two types of tender are again very close, with a few minor and a couple of major modifications required. My first thoughts were that there was a bit of work to be done to the top and back of the tender, so the first thing to do was to lever the tender body off its chassis to make this work a bit easier. The U.S. loco has a large backing light, which is something we don't need, so this can be pushed out from below. On the model I bought, this light was loose, and fell out while I was taking the tender apart, but not everyone might be so lucky. The square hole left in the tender top was patched with a bit of plastikard.

The water fillers on both tenders are different, but as I couldn't see an easy way to convert the big oval U.S. one to a small cylindrical S.A. one, I left it as it was. The wedge shaped arrangement on the top of the tank, forward of the water filler, is a mounting for a coal pusher, but again this device is a bit awkward to get to and satisfactorily remove, so I just hacked it about a bit until it looked like some sort of flat box. Probably what I should have done was to cut out the whole top of the water tank with its incorrect fittings, and replace it by a built up one with the proper fittings. At the rear of the tender body, I filed off the moulded-on marker lights, and also filed the rear buffer beam flat. A deep plastikard buffer beam was glued to the face of the existing beam, and buffers similar to those fitted to the loco front were attached. 'Divers helmet' marker lights on plastikard platforms were glued to the tender rear, and the curved upper section of the fixed ladder was cut away where it protrudes above the tender.

**Necessary tender modifications**

Whereas the U.S. tender had sides that were flat all the way up, the South Australian tenders had their coal coamings curved over inwards at the top. I decided that the best way to do this modification was to cut the existing coamings off and then try and set them back on at an angle. I marked a line along the bottom of each coaming, just at the double row of rivets, and then holding the jewellers saw with its blade at an angle of about 10 degrees with the side of the tender, I made a cut from the rear of the coaming right through to the front. With the saw at this angle, one cut line went along the row of rivets mentioned, whilst the other went along inside the coaming, through the moulded coal. Careful cutting gave me a reasonably straight cut along the rivet lines on both sides of the tender, and two coamings with a more or less triangular cross section, most of this cross section comprising a narrow strip of coal. Then it wasn't too much trouble to file away these coal strips and get the insides of the coamings smoothed down so that they became flat plates and not wedge shaped pieces. Glueing these coaming plates back onto the tender sides gave me a tender with coaming plates sloping inwards. However, there was still quite a gap between the bottoms of these coamings and the cut lines along the top of the tender sides, and also inward sloping coamings are not inwards curved coamings, but a good application of 'Panel-metal' can fill the gaps and also form curves, so when the glue was set, 'Panel-Metal' was liberally applied and the tender put aside to dry while I considered the last major problem.

**Tender bogies.**

This problem was with the tender bogies, the U.S. engines having a Bettendorf type of bogie, whilst the S.A. engines had a bottom equalizer pattern. Both types of bogies were of the same wheel base, but their external appearances were vastly different. I must admit that I haven't yet been able to solve this problem. It might be possible to buy cast brass bottom equalizer bogies of suitable size, and use them in place of the U.S. ones. Another approach could be to get a pair of tender bogies off a 'Lima' C38, which while not absolutely correct would be pretty close. I have kept an eye out in model shops for the brass bogies, but have had no luck so far, and I don't know anyone who has a spare C38 tender with bogies. I have investigated the possibility of cutting out horn guides and equalizer bars from plastikard, and cementing them onto the outer faces of the existing bogies, thus camouflaging them somewhat. Any rate, at the moment my 600 class still has Bettendorf style bogies beneath its tender.

With the 'Panel-Metal' set, it was possible to file and sandpaper the tender coamings into smooth curves. This eliminated the rivet detail in the coaming area, but I didn't worry too much. It also eliminated the row of beading along the top of the coaming, but this, together with another row of beading at the botom of the coaming I was able to reproduce with ruse wire. By now about all that was left to do was to remove the U.S. railroad name from the tender sides, and re-assemble the loco by re-inserting the lead weight into the boiler, the loose underpart being clipped, but not cemented back in place, and then attached to the chassis.

**Painting**

My approach to painting this loco was to give the superstructure a priming coat of fairly thin Humbrol matt light grey. When this was done I set the whole thing aside to dry thoroughly.

Final painting was with two brushed-on coats of semi-matt black plastic paint. This type of paint gives a dense but thin film which does not block out fine detail, and is also fast drying. Finishing touches included the fitting of the four elliptical number plates; these being cut from plastikard, painted, hand lettered and stuck on their appropriate locations, one on each cab side and one on each tender side. It is interesting to note that the plates on the tender sides are not located centrally along the length of the side, nor even centrally with respect to the coaming.

A conversion of this type can be done quite quickly. I only took about four days of a Christmas holiday break, and that wasn't devoting every hour to the job. The Mehanotehnika locos are cheap to buy, quite powerful, and certainly don't require a lot of work to change them into a reasonable representation of an Australian loco, and I agree with the comment made by Bob Gallagher in his review, that they are certainly a good 'buy'.

Now having converted one of these locos into a South Australian 600 class, what can I do with another one? Perhaps buy two and try and make a double Pacific Garratt, or perhaps look up my drawing of a South African Railways 16E class and see how that looks. Maybe more news this time next year.

## ECONOMIC SWITCHING FOR GOODS YARDS

With today's rising prices, parents telling me to spend less on my layout, and me trying to operate on pocket money I decided there must be a way to cut costs. I immediately looked to switchgear. I thought about it for a while, looking at prices and the solution became obvious. Rotary switches. The system I worked out is suited, and cheaper, for goods yards with three or more tracks. Rotary switches cost about the same as a toggle switch or a little more, depending on where you buy them. More tracks can be controlled from one switch making a compact unit at a lower price, also only one lead is required to the switch as compared to a series needed for the number of toggle switches to do the same job.

I came up with three ways to use the rotary switch, although more are possible if you think about it. The number of throws is not important, just make sure you have as many or more throws than you have in your goods yard.

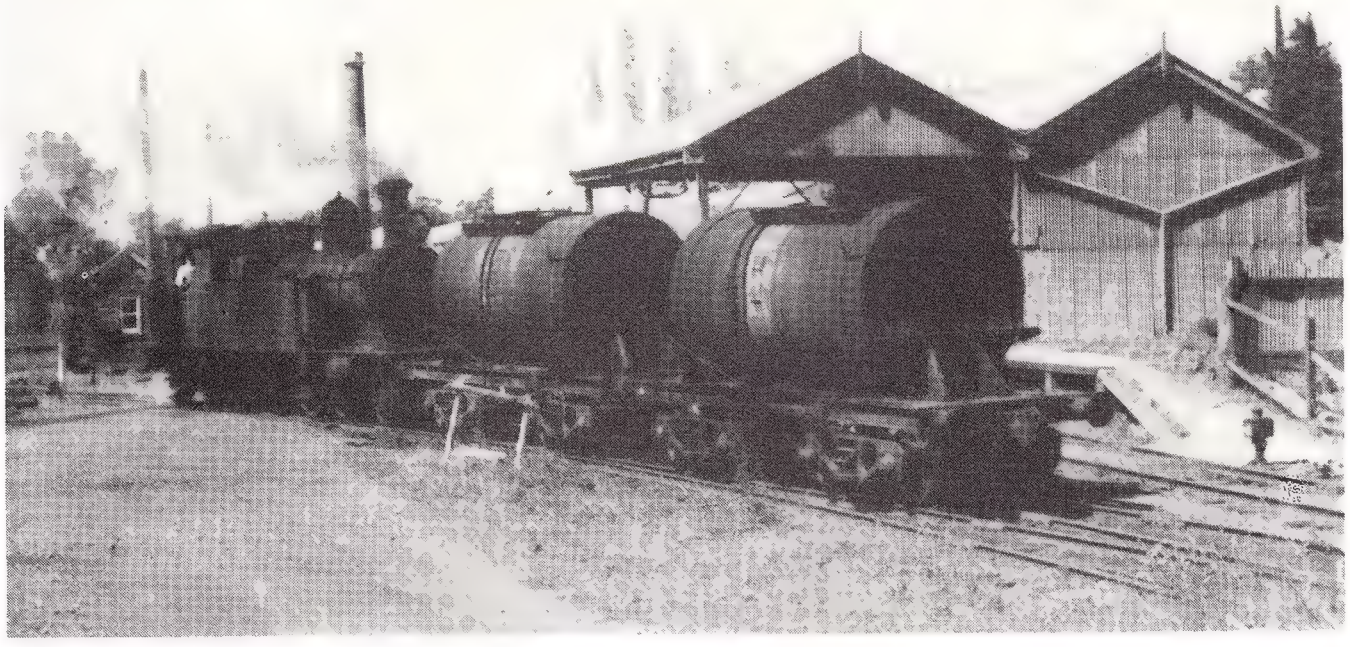
1. Method 1. Make the gaps in the rails as if for toggle or slide switches then connect the isolated rail to the tab on the rotary switch. When one rail is gapped a single pole rotary switch is used. The wire supplying the power to the rotary switch is broken by a SPST (on-off) switch so as no unwanted loco movement occurs during track selection should the controller be on. The lead track to the yeard is not connected to the rotary switch but is directly connected to the controller.

2. The second method follows the same track wiring as the first, but a double pole rotary switch is used. TO the second pole is connected a low voltage line and to the appropriate tabs are connected small light globes which act as indicators, so as the selected track can be quickly identified on your yard panel.

3. The third method uses a separate rotary switch for each controller to be used in the yard. Here BOTH rails are gapped and a double pole rotary switch used. The controller to use the lead track is selected by a Lead Selector Switch (L.S.S.) which is a DPDT for two controllers. An extension of this idea can be used on double ended yards, with a L.S.S. for each end. The yard can then be used by one or two controllers, the latter being totally independent of each other.

Rotary switches can also be used for progressive cab selectors as shown by C.J. Freezer in the PECO booklet "CAB CONTROL".

*Gary Winsor*



*Milk tanks at work. 3052 shunts the milk tanks between Camden station and the Dairy Farmers siding in October 1961. Laurie Anderson photo.*

# MILK TANKERS

**Max Burke, with a little help from his friends, describe a method of modelling the milk tanks that used to run on the NSWGR.**

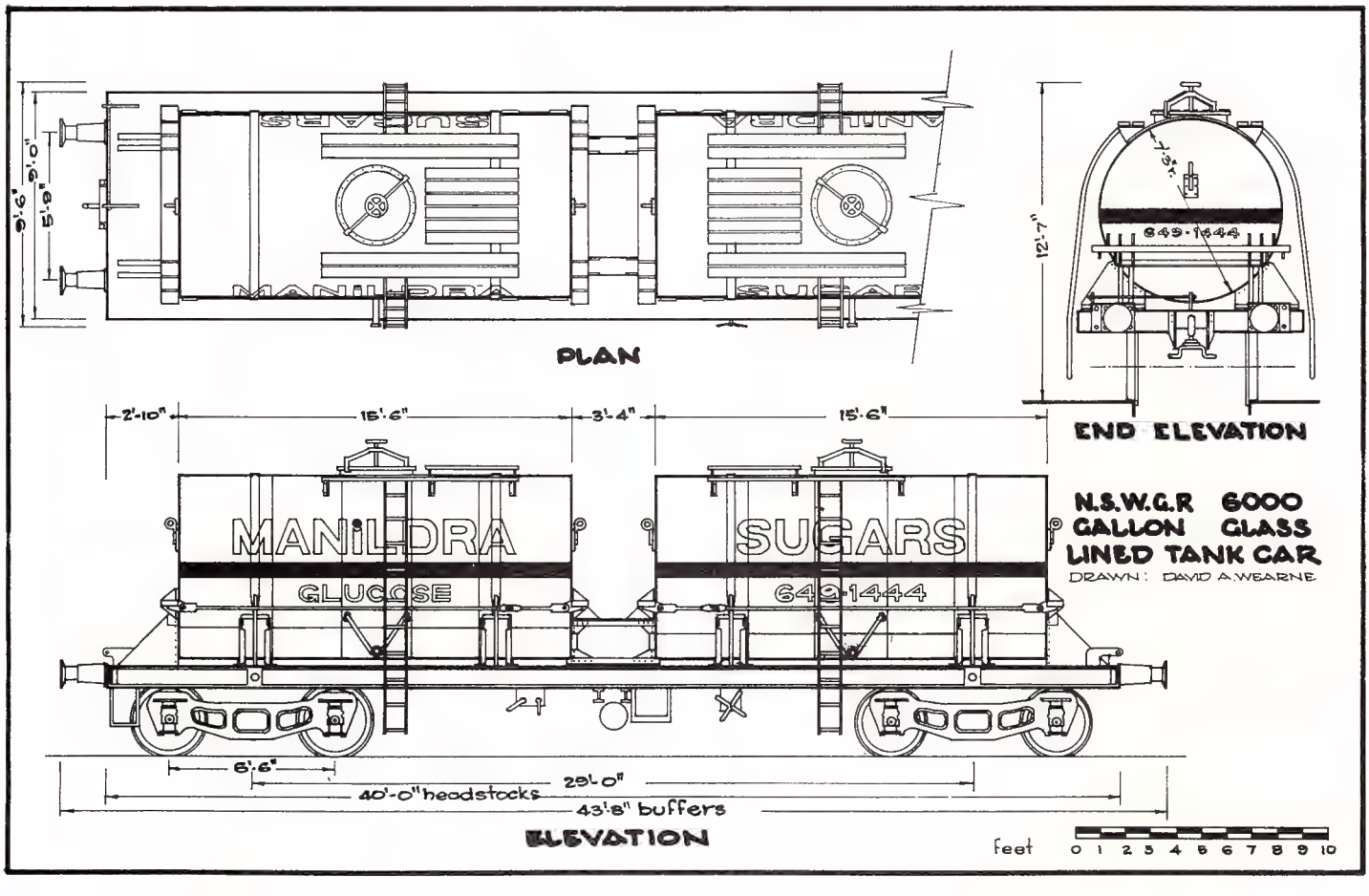
*Since writing the article for AMRM more information about these tanks, which are now out of service, has become available. This information will allow modellers to build a more accurate vehicle. Unfortunately the plans, included with the article, were prepared by David Wearne before this information became available. However, the many photographs will assist readers to differentiate between the many different styles of colour and construction that these tanks went through.*

## THE PROTOTYPE

**BMT 1.**

This 5,000 gallon, twin glass line, tanker seems to have been the first introduced for Dairy Farmers traffic. It was built on an open E wagon underframe; the tanks had an outside diameter of 6'9" (a little smaller than shown on the plan). The tanks sat in steel cradles and were held in place by riveted retainers. Exact date of introduction is not definite although it is believed to be prior to 1943.

During its life this wagon ran in many different liveries and was most probably the most colourful wagon on the NSWGR until



The DAIRY FARMERS Co Op MILK Co LTD
HYGIENIC GLASS LINED MILK TRANSPORT
The DAIRY FARMERS Co Op MILK Co LTD
HYGIENIC GLASS LINED MILK TRANSPORT

*BMT 1, as first delivered, with olive green tanks. Note that the dome on the right hand tank appears to be out of position and higher. However these domes were only a cover over the screw-down hatches and had to be lifted off to allow the entry of the milk. The milk was discharged from pipes fitted to the bottom of the tanks. NSWPTC photo.*

*BMT 1 at Waterfall, the livery is black with yellow name boards. Note the additional bracing and the omission of the dome. Harold Warren photo.*

*BMT 1, white tanks (slightly weathered) and new underframe. G. Ball photo.*

*BMT 1, recoded as BGT 1 and repainted. Photo by Graham Ball.*

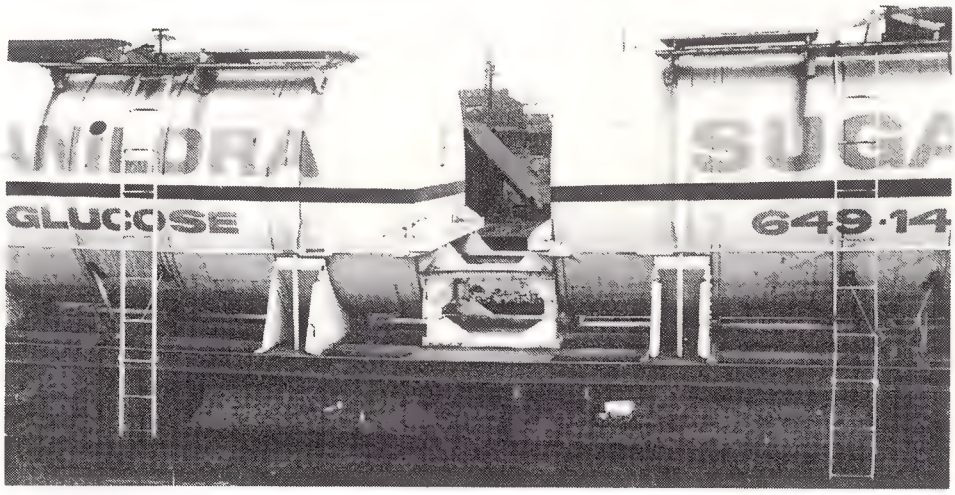
it eventually ended service as Manildra Sugar's BGT 1. As wear and tear took place many alterations in the body structure were made to keep the unit in service.

There seems to be four distinct phases in the career of BMT 1. Initially the colour scheme was dark (C38) green tanks with silver cradles and end retainers; the underframe, ladders and bogies were black. The lettering on the tanks was red with a yellow border, the lettering style and wording is shown in the photograph. It should be noted that at this stage the unit was free from cable bracing.

The next stage (shown by photographs) was when the domes were lowered (or removed) and additional diagonal bracing added. The domes were removable covers over the screw-down hatches. It is possible that they were discarded as too cumbersome for continual use. The paint scheme was changed to black, yellow name boards were added with black lettering. The underframe was still an open E wagon unit, which had queenposts and truss rod supports.

In 1964 the wagon entered Dairy Farmers' workshop for overhaul and was outshopped with a new underframe, while the riveted bogies were still retained; the diagonal cable bracing had been replaced with horizontal bracing. The colour scheme was light grey (almost white) with black underframes, cradles and running boards. The vehicle was devoid of lettering.

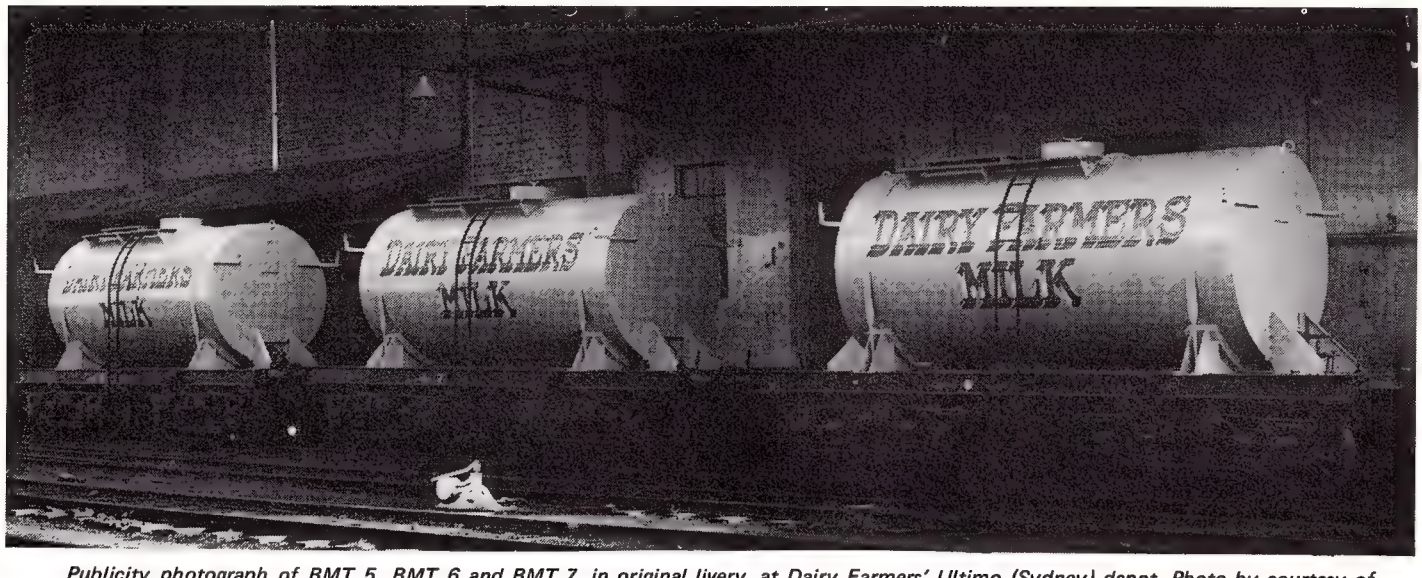
Ownership then transferred to the Manildra companies and was operated by Manildra Sugars, for the transport of glucose, it was coded BGT 1. The vehicle did not (noticeably) change in mechanical detail and this version appears in the plan accompanying this article. However, the colour scheme and lettering did change. The lettering was on both sides of the tanks and on each outward tank end. Consult the photographs for exact lettering and style. The colour scheme was white tanks with black underframe and undergear. The lettering was blue with a red line. The wagon was damaged with a bent frame (glucose is heavier than milk) and was removed from service.



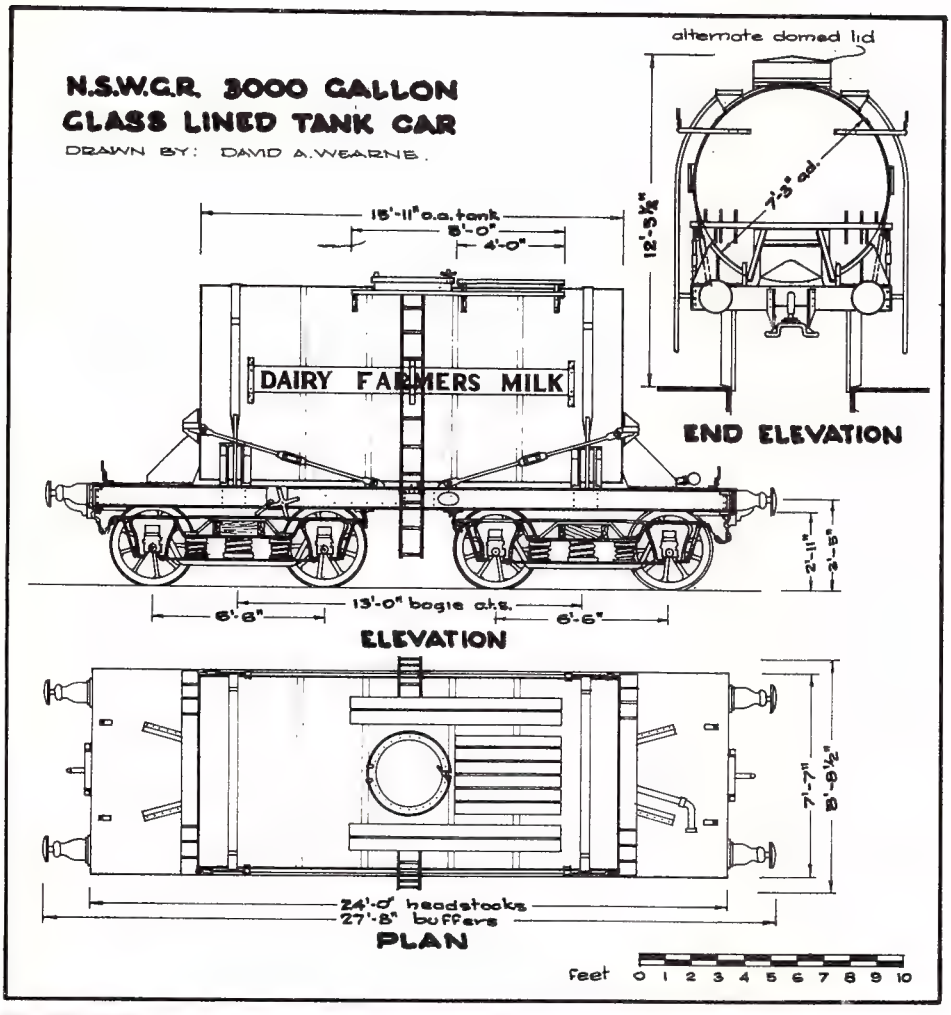

*Close-up view of centre supports. Photo by Graham Ball.*

**BMT 2 to 11.**

It is believed that these 3,000 gallon milk tanks entered service, around 1943, as a 15'11" by 7'3" O.D. glass lined tank to an open 24' underframe; the lettering is believed to have been red. The bogies were type G equalised, which were similar to those in use, at the time, on the SHG Brakevan. The open deck of the units is a feature of the class and full underframe detail can be found on the 3,000 gallon Milk Tank plan published by J. MacMicking,




*Publicity photograph of BMT 5, BMT 6 and BMT 7, in original livery, at Dairy Farmers' Ultimo (Sydney) depot. Photo by courtesy of Jack MacMicking.*



*BMT 9 at the Dairy Farmers, Ultimo (Sydney), siding after the addition of the diagonal side bracing. NSWPTC photo.*

247 Eastern Valley Way, Middle Cove NSW. The plan is in H0 and costs 80c plus postage.

As with most vehicles conversions occurred and units 4 and 10 were converted to 4,600 gallon capacity tankers (presumably milk) in 1963. These tanks were mounted on a 27' underframe.

Following the introduction of the BMT 12 to 17 units, modifications were made to the earlier (2 to 11) units by strengthening the end braces and installing diagonal cross bracing. These can be observed in the accompanying photographs. At a later stage the G type bogies were replaced with Bettendorf units.

The colour scheme changed from the attractive introductory colours to plain black with yellow name board, and white without name board. The units continual use in grimy areas saw the colour change to black; in many cases this was all dirt.

**BMT 12 to 17.**

Again the date these 3,000 gallon tanks were introduced is unclear, but it was after 1949. As introduced they were similar to the earlier models except the tank had a larger diameter (7'5" I.D.), diagonal cross bracing and stronger end bracing. The G type bogies and open underframe were still used. It is believed that the initial colour scheme was black with yellow name boards, but after a period the name boards were removed and units painted white. After use this faded to off white (light grey) and the weather took its toll. The G type bogies were replaced by Bettendorf. All units are now out of service.

**Operation.**

The milk industry, or the rail side of the milk industry, is a rather large subject which will be covered by AMRM at a later date. In short, milk was conveyed from the country milk depots to Sydney by special trains simply called "milk trains". In some instances milk was conveyed by fast passenger or goods train, but the milk train was the norm. Depots for pick-up were at Camden, Campbelltown, Menangle, Moss Vale, Bowral, Bomaderry, Dapto and many more.

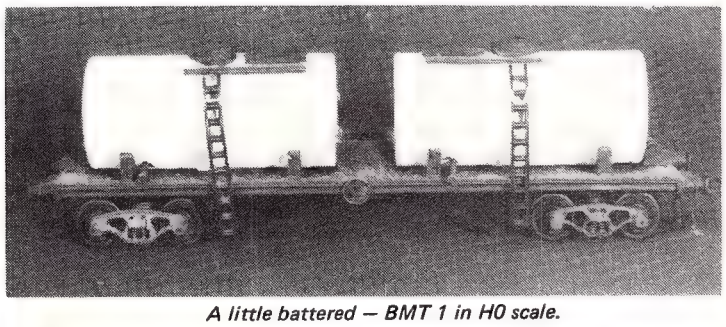
**Acknowledgements:** My thanks to Bob Gallagher, Howard Armstrong, Jack MacMicking, Graham Ball, Harold Warren and Alan Templeman for their assistance in compiling the data and photographs. Special thanks for information from John Forsythe of the NSWPTC Archives and to Dairy Farmers for their co-operation.

**References:**

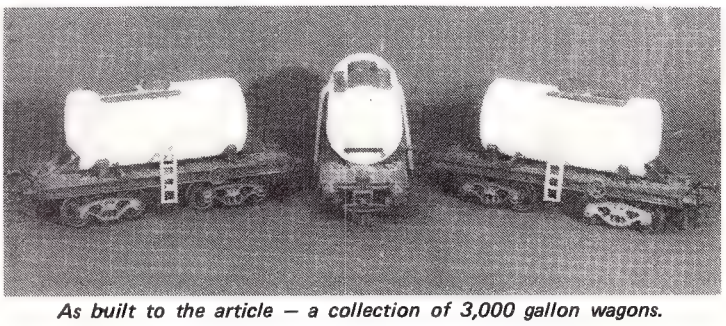
NSWPTC wagon diagrams.
Mixed Goods February 1964.
1949 Engine Loads General Instruction.

## THE MODEL

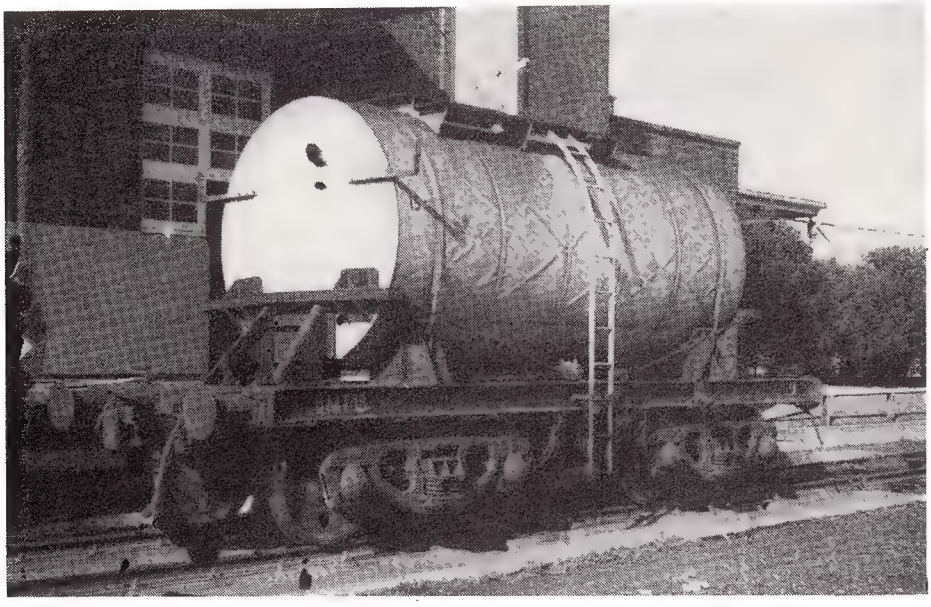
When scratchbuilding these cars for the Warrigul Plateau Railway certain liberties were taken. Studying both original plans showed that the single tank wagon was drawn to correct H0 scale whereas the double tank was drawn to 3/20" — 1 ft. I assumed that the tank size on both vehicles was the same size so the latter drawing was adjusted by ratio during its construction. The underframe of the double tank scaled out as being slightly wider than that of the single tank. Both vehicles had buffers and rivetted bogies. This is where the liberties were taken.



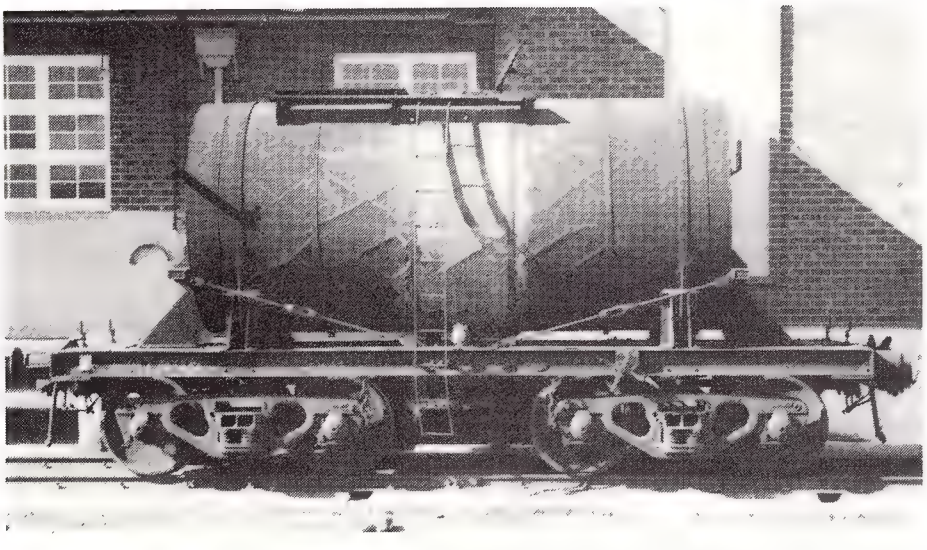
*A little battered — BMT 1 in H0 scale.*



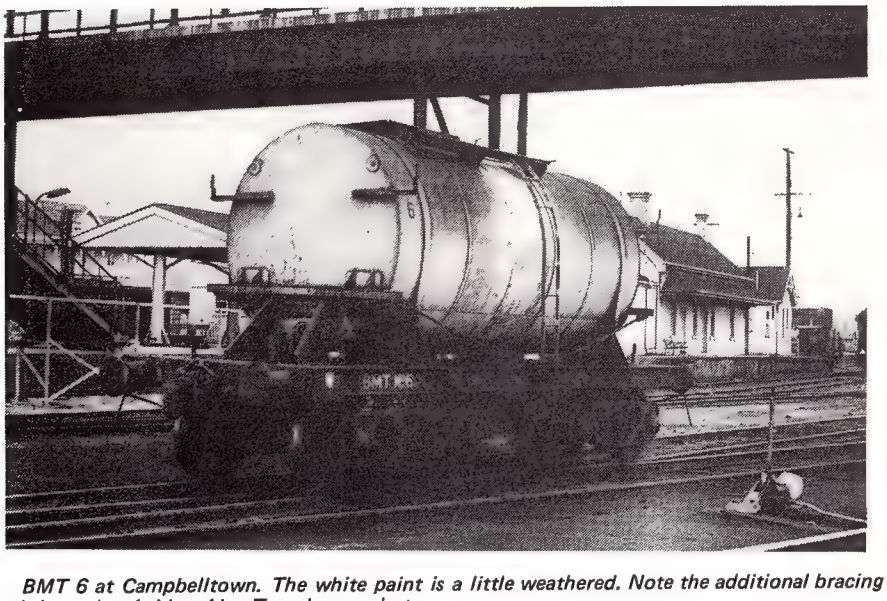
*As built to the article — a collection of 3,000 gallon wagons.*



*BMT 15 at Dapto in 1964. The tanks were still white and the unit had new bogies. Howard Armstrong photo.*



*BMT 16 at Dapto in 1970. Note the different bogies and the metal pressing in the tank. The lid of the top hatch is open. Howard Armstrong photo.*



*BMT 6 at Campbelltown. The white paint is a little weathered. Note the additional bracing and the end and sides. Alan Templeman photo.*

**Materials**

The following is a list of materials I used for construction:-
1" O/D PVC conduit, for tanks.
.020" styrene, for tank ends.
PVC rod, for domes.
Brass sheet for decking.
1/8" x 1/4" brass strip.
Code 100 nickel silver rail.
Fleet buffers and bogies.
Mantua couplers.
Faller and Airfix ladders, etc.

I build one twin tank and three single tank wagons, all for Bovine Industries running on the W.P.R.

It might be appropriate at this time to point out that these wagons were built some years ago, before commercially available parts came into being — back in the good old days when NSW modelling was just beginning, therefore if my methods appear rudimentary by today's standards this is the reason.

**Underframe**

The underframees were made using .015" brass sheet cut to width and length (less the thickness of the buffer beams). Two lengths of rail were cut to the same length and sweated 1 mm in from the edge of the side. The buffer beams were fabricated from 1/32" brass and sweated onto the end of the underframe, the top of the buffer beam being level with the underframe top. The fishbelly centre frame was fabricated from 1/4" x 1/8" brass and sweated to the underside of the vehicle along the centre line. Tank supports were also made from this size brass, appropriately filed to fit the tank contours. These were then sweated into place. The end stops were made from .005" shim.

At this stage it is most important that bogie bolsters, coupler height packing, tank holding method, etc. be determined. This will depend upon the type of bogies used and the packing needed to bring the wagon frame up to correct height.

This, then, completes the soldering for the basic wagon body. It is recommended at this stage to clean up any surplus blobs of solder and flux using scrapers, files, emery paper, etc.

The method I used for securing bogies was to mark the position for the mounting screw, drill for clearnace of a 6BA cheese-head screw and sweat a 6BA nut over the hole on top of the wagon (see sketch). The screw is in turn held firm by the use of a lock nut. Adjust bogies for lateral movement, tighten lock nut and saw off surplus length of screw. Fit couplers of your choice.

**Tanks**

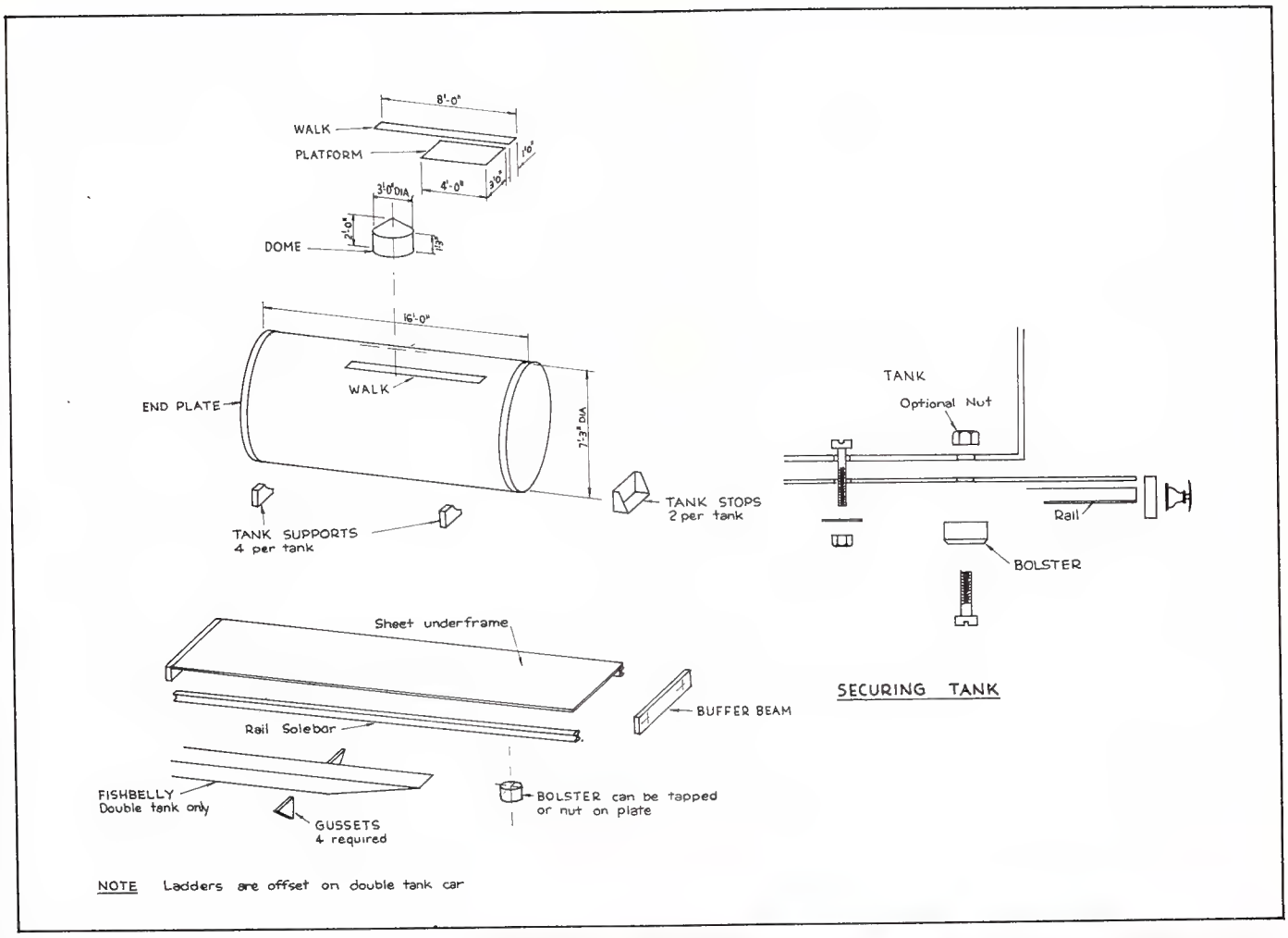
The original tanks are glass lined, however I did not consider it necessary on this job.

I used PVC tubing of 1" outside diameter suitably cut to length, and styrene sheet glued to the ends. Use solvent sparingly as it can ruin a good job. The ends were then trimmed and rounded to conform to the tank. The dome was turned from a length of PVC rod slightly over length to facilitate ease of installation. When drilling the hole to take the dome it is advisable to start with a small drill and work up to the required size. The dome was then installed to protrude the correct height above the tank.

This is where the trouble began. Because of the nuts on the underframe the tank would not sit low enough. I had gone too far to turn back so I simply marked the position of the nuts in relation to the tank and drilled holes in the tank large enough for the nuts to sit in. The tanks were then screwed to the underframe by a centrally located screw from underneath. Walkways and ladders were then added as per plan.

As outlined in my opening remarks these vehicles were made (a) as a matter of urgency and (b) from whatever was available at the time. Were I to make them now would result in an entirely different method, particularly with the bolsters. Anyway, they did the job and are still in use.

A job which I am currently working on is yet another variation of these vehicles. This one has three tanks — the centre one of which carries flavouring which, at 15 cents per half




pint, is quite a revenue earner. With straw racks attached it makes quite an interesting vehicle.

## DON'T OVERLOOK THESE ITEMS

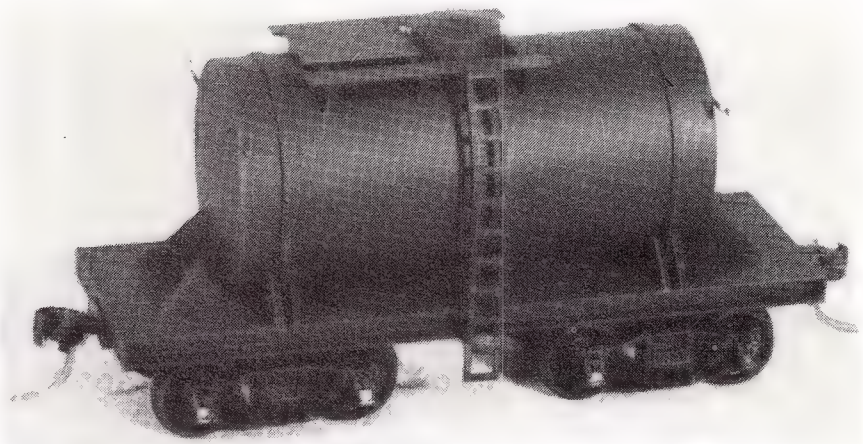
We have become accustomed to specialised tools to do specialised jobs. There are many inexpensive devices around that are also a help to have in handy reach on the work bench, quite often for uses other than what they were intended for.

A suction device is versatile. On a square of Laminex affixed to the work bench it can be turned around to any position to make some jobs easier. The one I bought from K-Mart for a couple of dollars years ago also has two sets of jaws, one wide and one narrow with V slots for holding round rodding, etc. Not only can either set of jaws be swivelled up for working, they can be fixed at any angle. Sometimes it is handy to have the jaws vertical.

From the same source came a pair of wire strippers that can be dialled to easily strip any size of wire. Their most endearing feature, however, is the cutting jaws that make a very clean cut when used as rail nippers. Davis 5-minute epoxy comes in small tubes with tiny pointed nozzles. Its strength as an expoxy is not as good as some, but it is very easy to mix up very small amounts, which often do not need an extremely strong bond anyway.

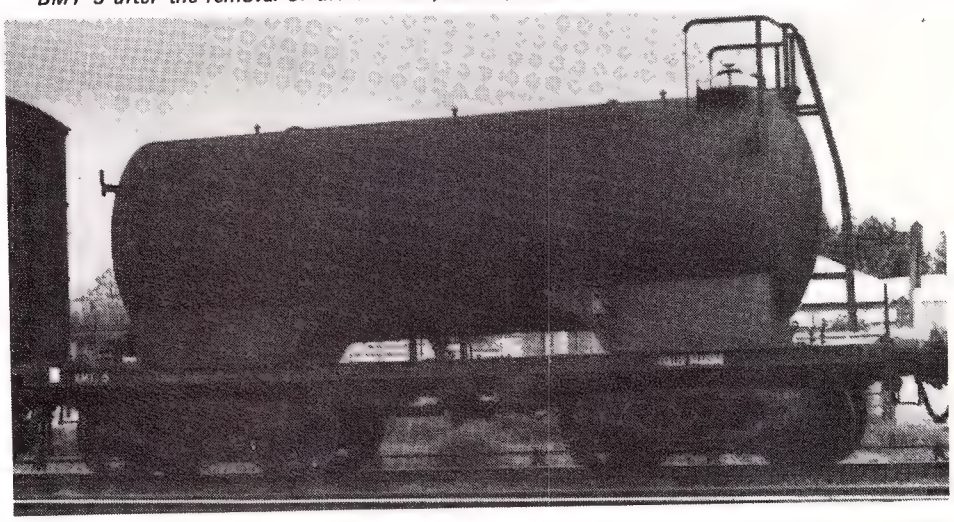
Those dollar cigarette lighters are not only a boon to smokers. Pass spring brass wire through the flame if you want to anneal it, or flash it around an area of semi-hard brass sheet where you want to make a sharp bend without it breaking. I used to hone up a hook shaped blade from an old hacksaw blade for scribing styrene, etc. An Olfa tungsten tipped P-Cutter saves all that. Incidentally it is also very useful for cutting sheet brass without it curling and distorting, as happens with tin-snips. Just scribe it a few times along a steel rule and snap off.

*Ross Hurley*



*To provide milk tank traffic for operation on the Menangle exhibition layout, an associate, Es' Davies, built 3 single tank wagons using brass tube on a flat deck. Graham Ball photo.*

*BMT 5 after the removal of the old tank, and replacement by a new tank. Photo G. Ball.*



# MODIFIED THROTTLE — Modified Again

## APPENDIX B

**R. McLennan discusses further modifications to the transistor throttle. Continued from the September/October 1978 issue of A.M.R.M.**

Following construction of the previously described modified throttle, the unit was tested over a three month period on 00/H0, H0 2½ and N Gauge locos. The tests highlighted a number of problem areas which, in my opinion, needed to be fixed before the throttle could be classed as effective in actual service: this was particularly so in the N Gauge system when considered in relation to uncoupling procedures.

The reader will perhaps remember that the main aim of the unit was to limit the maximum possible speeds and rates of acceleration to realistic values. I have no desire to enter into scale speed arguments, however, as far as I am concerned, if a model covers 1 foot of track in one second the representative scale speeds are as follows:-

00-52 MPH, H0-59 MPH and N-109 MPH (160th scale)

As far as acceleration is concerned, this can be related to the distance covered in unit time from a standing start.

The considered results of this testing phase prompts me to state that for N gauge, much slower rates of acceleration and slower linear speeds are required: in fact, I believe that an N gauge unit must be different to a unit designed for the other gauges.

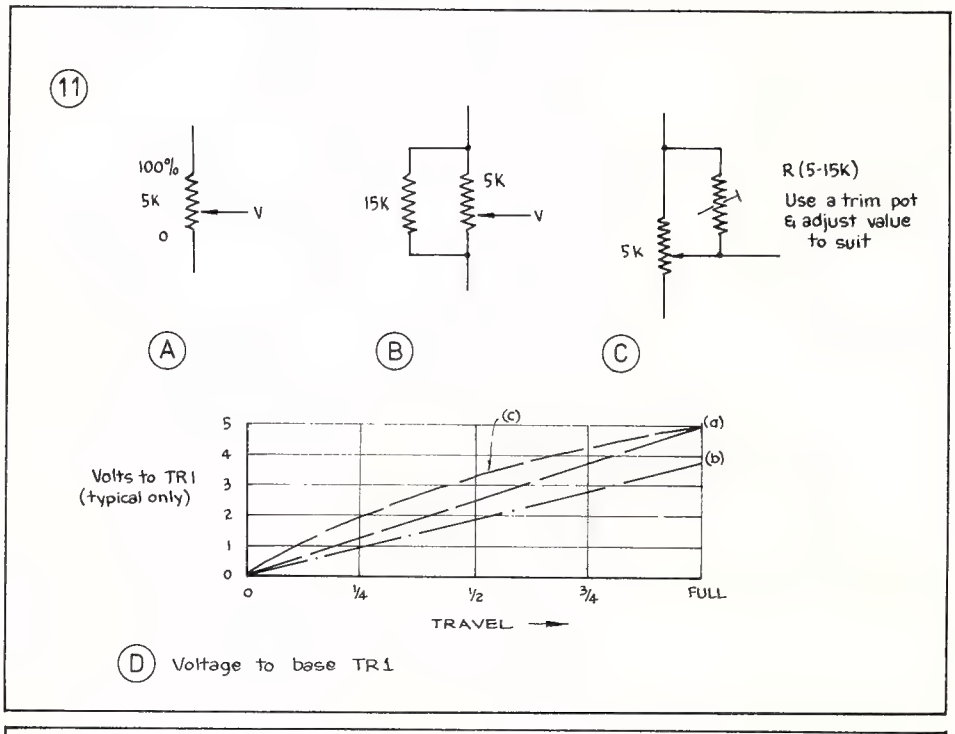
The throttle described as Figure 7, although most effective with locos of similar manufacture, does not cope with a wide variation of products and gauges. The trim resistances associated with switch seven had to be increased to 10K for N gauge. In any event the settings were a compromise and so, switch 7 was replaced by a single variable resistance (SPEED) so that more accurate calibration of the throttle could be obtained for each locomotive in use on a layout. The throttle was also tested on a 15 volt supply and after resetting of the trim pots performed with good results.

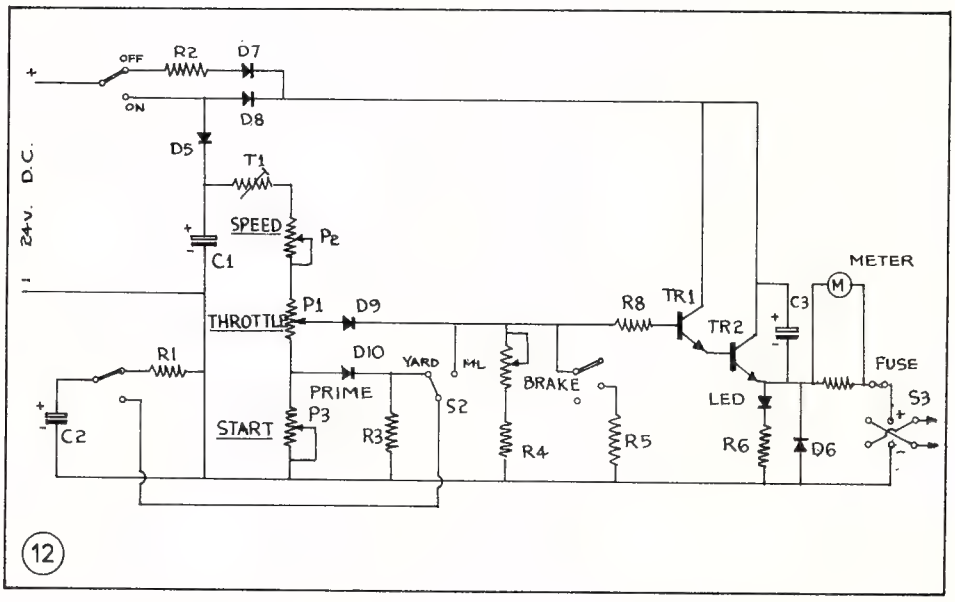
A major operational problem arises from the fact that considerable throttle movement is necessary to produce movement out on the track, this appeared to change with locos and was rather annoying. Attempting to manually drive the trains at slow rates of acceleration was not easy as nothing happened during the early movement of the throttle lever and so, one was tempted to open the throttle too quickly with unrealistic results.

In addition, it was also difficult to drive a train at slow constant speeds for one never quite knew when the train was going to move, or for that matter when it was going to stall. This aspect is not just related to this design of throttle, it appears all too common in the commercial ones as well. The overall effect of this is to provide almost full speed control in the last 50% of throttle movement. This aspect becomes quite a problem when using the N gauge Rapido uncoupling device; it is essential to obtain good control for effective uncoupling and recoupling and, so much slack makes things more difficult than they should be.

In order to reduce this throttle slackness it was necessary to introduce a second variable resistance (START) below the throttle pot so that the lowest possible voltage at the base of TR1 could be raised, if this pot is set to allow movement of the train with the throttle open say 5%, it will be found that full control is regained over the whole range of throttle movement and as a result, far better control of speed and acceleration is possible. As an example with an N gauge loco calibrated for a top speed of 18 MPH (6 seconds per foot) it was possible to inch the loco at a rate of 10 minutes and 7 seconds per foot. I am not saying that this is realistic, it does however, give some idea of what can be obtained with very simple electronics, if you are prepared to experiment. Uncoupling and recoupling is easier with this type of full movement control.

Despite the fact that full scale control had been achieved it was noticed that a good deal of the speed control was gained at the top end of the movement; as an example at the half way mark on the scale, less than 30% full speed had been achieved. This appeared to indicate that some method of flattening out this area was needed. This retains the linear response but reduces the voltage spread to the base of TR1. A second alternative is shown in Fig 11c which actually flattens out the voltage curve to the base of TR1. The smaller the value of the




### PARTS LIST — Fig. 12

**Diodes:** EM404, D8 — 2 in parallel.
**Resistances:** All ½ watt for convenience or as noted.
R1, R5 — 47 ohm
R2 — 270 or 560 ohm
R3 — 100K ohm
R4 — 5 to 10K ohm
R6 — 1K ohm 1 watt
R7 — 1 ohm 1 watt
R8 — 5.6K ohm
Trim T1 — 50K ohm carbon
**Pots:**
Throttle .5K ohm log slider SOANAR C5K ohm or Linear —15K ohm (Fig. 11)
Speed. 100K ohm SOANAR A100K ohm
Start. 10K ohm SOANAR A10K ohm
Brake. 100K ohm SOANAR A100K (modified to Fig. 8)
**Capacitors:**
C1 — 2500 micro farad
C2 — 1500 micro farad (or to choise)
C3 — 470 micro farad.
All 50 volt working.
**Switches:**
S1, S3 — Double pole changeover SATO
S2 — Single pole changeover SATO
Micro Switch — Single pole changeover CSA
**Transistors:**
TR1 — 2N2053 or BFY52
TR2 — 2N3055 plus heat sink.
**Uncoupler:**
Push button.

resistance the more flattened the curve becomes and with it, better throttle control. By lowering the resistance value to about 4000 ohms gave about 55% full speed at the half way point. The choice is really yours — Refer Fig 11(d) for a diagramatic representation of the voltage to the base of TR1 — (Start pot at zero, speed pot adjusted to give 5 volts at full scale for Fig. 11(a) ).

The introduction of the variable resistances above and below the throttle pot as a replacement for the original switch 7 of Figure 7 has left us with no facility to delete the inertia effect — this will be discussed in detail in a moment.

**Inertia/Momentum and Braking Effects.**

The rate of acceleration provided by the Moyes' design gave good results with 00/H0 locos, but I felt that N gauge requires slower rates for realistic results. As an example one could say that if 6-8 seconds for the first foot of travel in H0 gauge is acceptable, then something in the order of 15 seconds is required for N gauge, this can be most effectively gained by an increase in the value of capacitor C2 — in this case, from 470uF to 1500uF, in any event this really becomes a personal choice in relation to what LOOKS RIGHT out on the track.

As previously mentioned I had wired into the circuit a class 1 voltmeter which allowed me to read the voltage at the base of TR1, at the time I did not fully understand the implications of this action and how this could be used to advantage in the momentum effect. At extremely low rates of acceleration the volt meter gave an indication of whether the loco was still accelerating under inertia control; in addition when the throttle is turned back to zero, momentum/roll on effect takes over, and the meter with its resistances gave a very desirable degree of controlled braking. It provided a permenent blead for the capacitor C2 and as a result a circuit change was made to incorporate the equivalent resistance, (about 100K ohms) as the main brake system.

The original micro switch attached to the brake has taken on the action of emergency brake. The micro switch M1 attached to the throttle has been deleted. The brake has been wired so that when the lever is away from the operator the rate of braking is lowest (resistance largest) and as the lever is pulled towards the operator the brake rate increases until, if required the emergency condition can be invoked by pulling hard to provide a wheel locking situation via the micro switch.

The provision for variable inertia via a variable resistance in the line to the base of TR1 has also been deleted as the mass of a loco plus rolling stock appears to provide this feature as an automatic part of the system; with the 24 volt supply, the resistance introduced by the speed pot, appears to provide enough variation in this regard.

The higher level of inertia provided by the 1500uF capacitor introduces a long starting delay (up to about 45 seconds) into the system. Some way of reducing this had to be found. The original concept of separate shunting and main line systems is retained via what is now a simple single pole change over switch labelled YARD — MAINLINE. In the YARD condition direct control without inertia is provided. The priming circuit for capacitor C2 involves only a diode and a 100K resistor (to simulate the brake bleed feature) so that whilst the throttle is being used on direct control the capacitor is being charged to the preset level of the START pot.

It should be noted that when the throttle is first turned on, the capacitor C2 is in an uncharged state and thus, as charging commences the equivalent of a dead short around the START pot is introduced: this has the effect of completely deleting the effect of the START pot and as such, the first action should be to set the throttle for main line use with the throttle at the full speed setting, once the loco starts to move the YARD condition can be selected and from that point on the capacitor will follow the setting of the START pot.

Mention must also be made of the fact that the START pot setting allows current to pass through the loco motor and depending on the mechanical state of the loco will cause it to 'hum' and heat up. This aspect can be controlled by applying the brake which grounds the base of TR1 to a level set by the fixed resistance incorporated into the revised braking system. In this condition the capacitor C2 discharges to the level set by this resistance but never to the condition of zero voltage unless of course the emergency brake is left on.

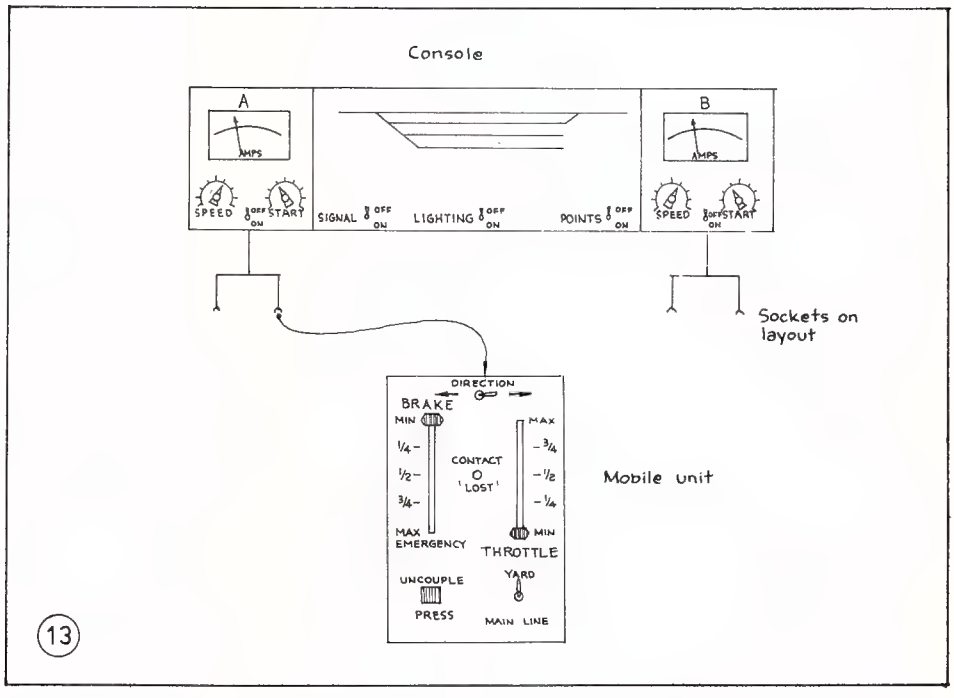
In my proposed scheme of things I have to work a hidden siding and as such I felt it necessary to have some indication of whether the loco is still under throttle control, a light emitting diode and loading resistor has therefore been added to the supply line from the emitter of TR2, this varies in brightness with throttle setting being at maximum brilliance when contact has been lost.

The basic circuit is now shown in Figure 12:

A considerable period of uncoupling/recoupling testing has also been carried out, and this has in fact effected the final layout of the unit. You see the effectiveness of uncoupling and recoupling appears to be inversely proportional to the distance from the area of operations and as such, it is my opinion that it must be possible to get the throttle close to the area of work. This can only be achieved with a 'mobile' unit, that is to say, the main driving parts of the throttle must form the main part of the system. I propose to use a 'dispatcher' whose task will be, not only to set the train route, but also to set the speeds at which the train can be driven. Thus the main on off switch and the SPEED/START pots can be separated from the main driving throttle. This also means of course that the 'hot' parts of the system can be left at the console and as a result, the throttle hand piece can be quite small and easy to operate. In addition I have decided to provide a number of plugs around the circuit so that the 'mobile' throttle can be used at the most effective position. This of course entails the use of a multi pin plug. The throttle also has provision to allow the operation of any uncouplers in the working area, a feature which has a lot of merit from an operational point of view. Figure 13 is a diagrammatic representation of the proposed system. It will be noted that included in the control console is a meter which in fact reads the current being drawn by the loco, this actually reads the voltage drop across a 1 ohm resistor and for N gauge is scaled to read up to about one amp, (1 volt drop across the resistor) this is also shown in Figure 12.

The reader of this article will undoubtably say that the development of the throttle has been long and drawn out and that I have changed ideas in mid-stream, this is of course quite true but it does show, rather effectively that one should not just accept what the commercial manufacturer has for sale; I spent almost 9 months on the throttle aspect alone before I arrived at this system of control.

*Perhaps a little knowledge, when combined with testing is not so dangerous after all.*

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### A HELPFUL START

Sometimes it's a problem knowing just where to start. The first venture into a hobby shop after purchasing the initial train set can be daunting. With so much on display, of unknown technical complexity there must be many questions the prospective modeller wants to ask.

The hobby shop dealer will usually help, but there are times when he is so busy he just can't give the attention he knows is required. After Christmas a lot of new modellers join the readership of model railway magazines like AMRM. For the beginner a magazine can offer some help, but it is often not enough. If we were to answer every question he is likely to ask in his first few weeks it would take a year of issues. Steering him (or her) to the selection of basic model railway books is the best thing that can be done.

Two series are particularly recommended. They are the Kalmbach books published by Model Railroader, and the Peco "Shows You How" series of pamphlets by Railway Modeller. They cover the full range of information from baseboards to track design, wiring and scenery. As experienced modellers know they are not restricted to beginners. The information on each topic is further developed, and they become permanent reference sources.

Kalmbach produce HO and N scale Primers too which are written especially for the modeller just starting. They cover in the one book all the areas mentioned above, as well as discussions on choosing the best couplers, and helpful chapters on kit construction, etc.

Nothing remains static for long. As new ways of doing things are found, or easier ways of doing old things, they get published in model railway magazines. We also get inspiration from seeing the achievements of others in the hobby. There are two other ways we at AMRM can help you get started.

*Ross Hurley*

### CONVENTION

A convention has been organised for May 25-27 1979. To be held at Camp Carey (Wentworth Falls, NSW) and activities are designed to cover all the family. For further particulars contact Peter Betts, 40 Merrilee Cres, Frenches Forest, NSW 2086 Ph (02) 451 9744.

*4513 passes through Newbridge with a train of empties heading west. 5/12/1969. WH and BWH bogie vehicles can be seen plus a couple of BCH coal hoppers cleaned and fitted with tarpaulins for temporary use carrying wheat. Alan Templeman photo.*

*4434 and 4463 pass through East Maitland on an Up bulk wheat train. 29/12/1976. The train includes WTY, FWH and WHX bogie vehicles with RU four wheelers at the rear of the train. Photo by Alan Templeman.*

*3524, assisted in the rear by 5243 at Ardglen during the 1961-62 wheat season. The train, headed for the Newcastle export terminal consists of a number of different wagons. The first wagon is an 'S' truck (covered with a tarp), then some 'RU' hoppers, followed by a couple of 'BCH' coal hoppers covered with tarpaulins, another 'RU', then a 'BWH', some more 'RUs' than an 'U/K' wagon covered with a tarpaulin. Graham Ball photo.*

# SHIFTING THE GOLDEN GRAIN

**A brief outline into the wheat industry in N.S.W. Compiled by Phil Collins.**

**Introduction:**

The recent 1978/79 wheat crop was the 191st to have been planted in New South Wales. The first wheat crop was planted at Sydney Cove in 1788 and was a miserable failure. A year later, where Parramatta now stands, the second crop flourished and was harvested by the new colonists with great pride. This began an industry that today is one of our major export earners.

Over the past few years Australia's average wheat exports have been around 8 million tonnes, making us the fourth largest exporter behind the U.S.A., Canada and the Argentine. New South Wales is the biggest producer of wheat in Australia, the 1976/77 crop being 5.1 million tonnes of which 4.9 million tonnes were carried to the seaboard by the P.T.C. Rail Division.

Wheat is second only to coal in respect of tonnes carried by the P.T.C., coal contributing just under half of the total freight load of 34 million tonnes in 1977. One can see that there is a strong link between the wheat industry and the railways, and this article proposes to discuss this relationship as it exists, and did exist in the past, in New South Wales. Similar pictures unfold in other states and maybe in the future we can comment on where they differ from New South Wales.

**The Organisation:**

The movement of 4.9 million tonnes of wheat from all over New South Wales to the major local consumers and the points of export does not happen by chance. A considerable degree of co-ordination takes place to make the transfer a reality. The Australian Wheat Board is responsible for marketing wheat in Australia and overseas. The grain Elevators Board of N.S.W. provides the receival and storage facilities in the country areas and the two bulk export terminals at Glebe Island in Sydney and Bullock Island in Newcastle.

The initiating responsibility for movement comes from the Australian Wheat Board who advises the Grain Elevators Board and the P.T.C. of forward requirements of the grades and tonnages required to meet the needs of export contracts and local millers. There can be as many as 19 grades of wheat stored at 270 sites in New South Wales and the correct type and tonnage must be at the export terminal when the ship is in port.

Wheat Officers of the P.T.C. arrange for empty wagons to be made available at the particular country storage, the Grain Elevators Board arranges for the wagons to be loaded and finally the P.T.C. has to arrange motive power to transfer the wheat to Sydney or Newcastle. The strain on motive power that the recent crops has produced is considerable,

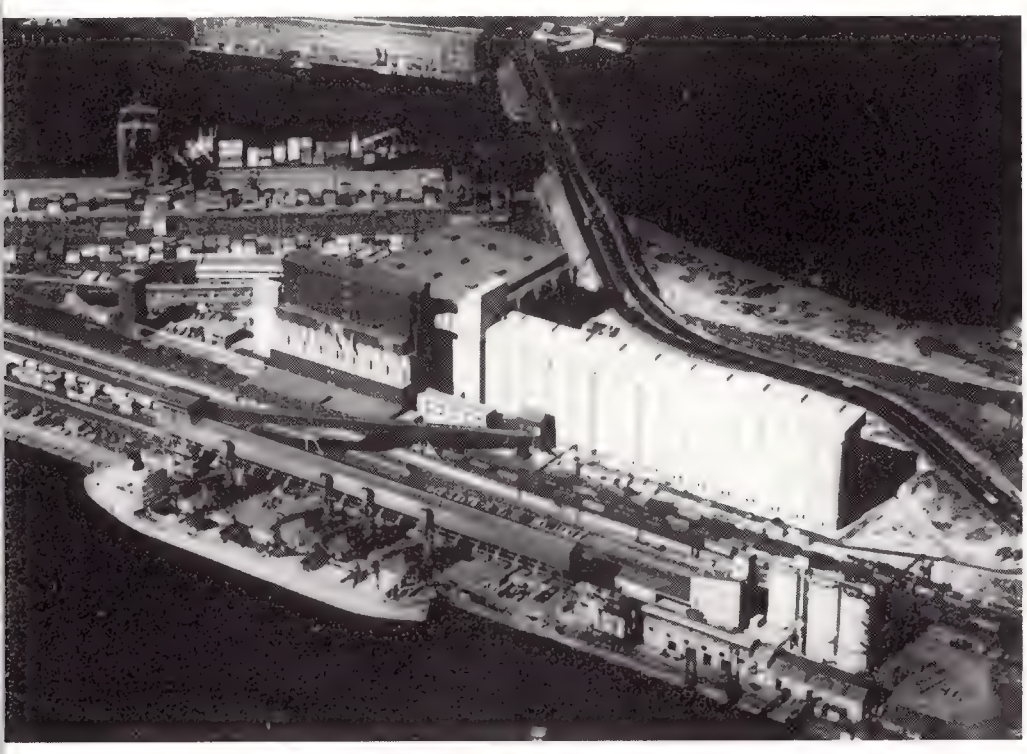
*3641 assisted in the rear (out of photo) by 5242 lifts a load of wheat out of Willow Tree in the 1961-1962 wheat season. A tarpaulin covered 'S' wagon and a tarpualin covered 'U/K' are in the consist. Graham Ball photo.*

*This NSWPTC photograph depicts a branch line 48 class at the head of a string of 'RU' hoppers.*

especially as all of the wheat has to cross the Great Dividing Range to get to the sea-board. Today most of the wheat is moved in unit trains at near express speeds, but not always have we had three 2,000 h.p. Alcos and 20 shiny aluminium hopper wagons strain the drawbars on the 1 in 40's from Molong to Orange or over the Liverpool Ranges. Let us now go back in time to see how the current scene evolved.

**Rail Development:**

The expansion of the wheat industry in Australia was directly rpoportional to the ability of the farmer/buyer to transport the wheat from the farm to user. With the coming



*The Sydney terminal for loading wheat into ships. Note that the wheat is conveyed across the container terminal tracks to the wharf, an aspect that can be applied in model form. Photo by courtesy of the NSWPTC.*

*The much used NSWPTC photo shows the loading of wheat into a bulk wheat wagon.*

of the railways in 1855 came the promise of a reliable method of transport for the tonnages needed by the rapidly expanding colony. However, it was not until around 1890 that Australia became totally self-sufficient in wheat. It is hard to put an exact date on this as seasonal fluctuations meant some special grades still had to be imported as late as 1898.

In the 1880's the great railway expansion beyond the mountains began and so too did the planting of wheat on the great western plains of New South Wales. By 1902 William Farrer had developed his Federation Wheat and yields began to improve till in 1904 the new nation was exporting 60% of its wheat production. This produced the first motive power crisis and much lobbying began by towns and councils for rail-links, culminating in 1912 with a Royal Commission into the lack of locomotives and rolling stock.

The years to follow, particularly the 1920's saw a revolution in motive power and the development of the maze of cross-country lines in New South Wales all aimed at moving the produce of agriculture to the sea and returning with the needs of the growing agricultural communities. It is not within the scope of this article to look at this in detail; if anyone is interested I can recommend the October 1973 issue of the A.R.H.S. Bulletin, which discusses in detail one of these branches, namely the Lake Cargelligo Branch.

The wheat industry was certainly instrumental in the establishment of many of these branches. In the following years they contributed greatly to the welfare of the communities along the line in many ways. However, now many are only used during the wheat harvest, the motor car and truck being used for the small commodities and personal transport. Branches that have suffered in this way include Mungindi, Burcher, Naradham and Rankin Springs, to mention but a few.

Even in these early days there was an organisation in the movement of wheat. Usually 30T and 32 class engines would be employed on the lighter branches radiating from, say, Temora. From Temora to Junee on the main branch 50 class engines would be used, until finally double heading of the standards or the mighty 57 class would be used on the mainline. However, during the wheat harvest, any locomotive type could be seen on wheat specials.

Rolling stock was a different matter and from the early days of "any old open or flat wagon would do" we have developed the modern high speed aluminium hoppers of the WTY type. The use and development of rolling stock largely followed the development of the

*Unloading bagged wheat from steel 'S' truck altered and recoded (BWF) for bagged wheat traffic. Darling Harbour was the site for this NSWPTC photo.*

*This photo from the NSWPTC Archives shows bagged wheat being unloaded into a horse drawn vehicle at Darling Harbour.*

*From the NSWPTC Archives, the first bulk wheat wagon at Ariah Park in 1917.*

*Bagged wheat on 'F' wagon at Lewisham 1946. Photo Bob Merchant collection.*

storage system, but we will look at the latter facet a little further on.

Initially all wheat was transported in bags. On arrival at the railhead the bags were loaded onto flat wagons or open wagons, covered with a tarpaulin and dispatched on its way. If the wheat had to be stored at the railhead it was merely covered with a tarpaulin. However, by 1900, permanent wheat stacking sheds and the usual loading gauge began to appear all over the wheat belt. A fine example of both still stand at Molong, but hurry.

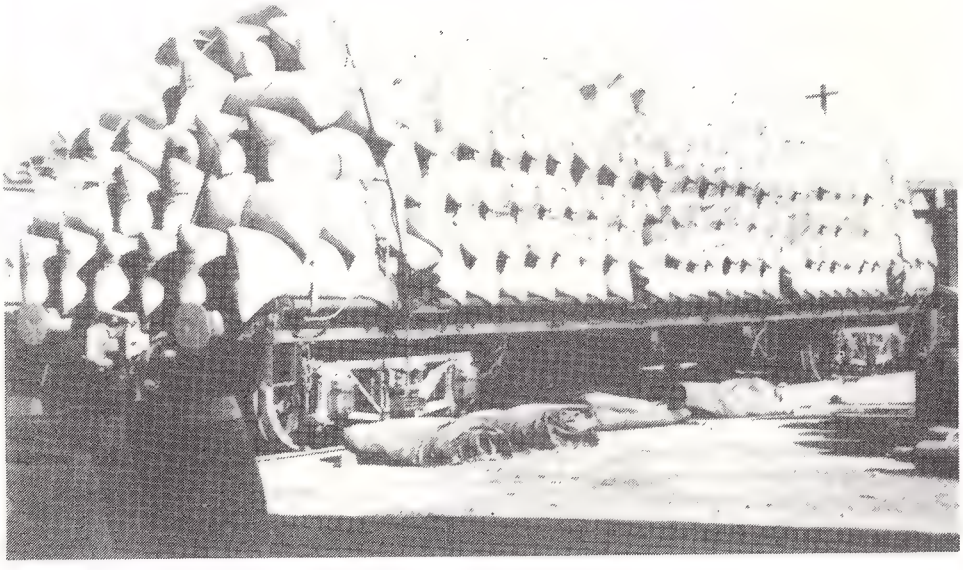
Stacking of the bags on the rail wagons was important for balance, optimum load and to ensure that the load was within the loading gauge. The 1928 Coaching, Goods and Telegraph Instructions set out loading patterns for everything from a four wheel "D" truck to a bogie "E" flat wagon. Among the others listed is the BWF, or bogie wheat flat, which carried a total of 225 bags at 12½ bags to the ton. The U wagon could load 300 and the K could convey up to 312. SF flats were not used for loading wheat but no explanation is given as to why this rule applied.

The use of bagged wheat as a means of transport suited everybody; farmer, railway and even overseas shippers were happy with the method. However, the first move away from bagged wheat came in August 1901 when the S.S. Persic loaded 1,224 tons of wheat at Darling Harbour. The bagged wheat was emptied into a primitive bucket conveyor system and, so, progress began in the bulk movement of wheat.

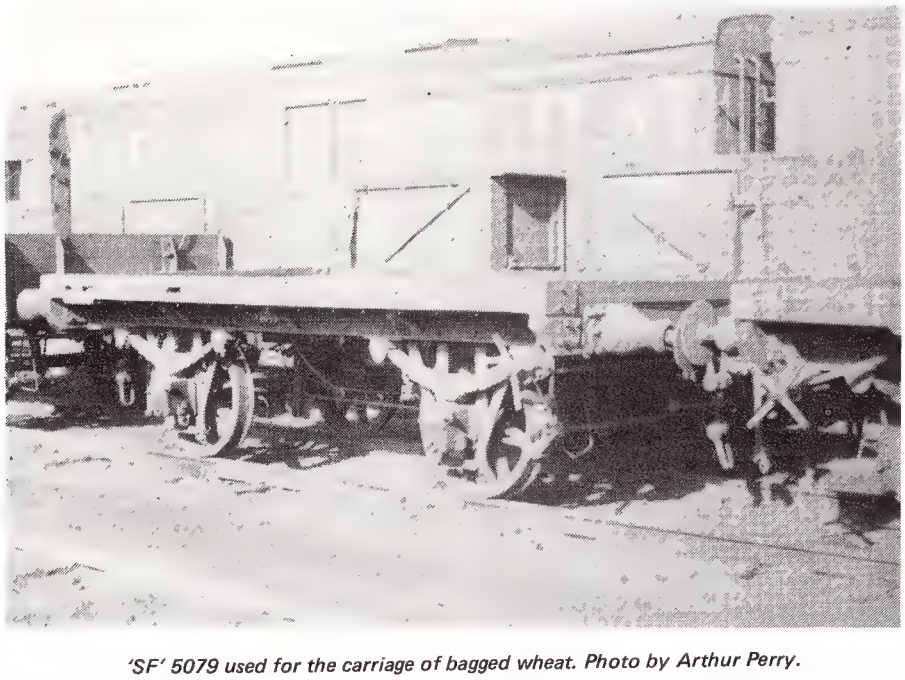
Progress was slow at first as, although bulk shipments left Sydney by sea, it was not until 1917 that the first use of bulk transport was made on the railways. The vehicle was a converted "S" truck and was loaded at Ariah Park. However, the wagon was loaded from bags, but it was the beginning of major changes in both storage and transport.

The 1920's brought the wagon which we know was a 22 foot, 4 wheel wagon of the familiar U-K type but fitted with floor discharge doors. This wagon was ideally suited

*The loading of bagged wheat into steel 'S' trucks at Glen Innes. NSWPTC photo.*



*MLE loaded with bagged wheat. Note the tarpaulins, used for covering the precious load, rolled up on the ground. Photo from the Bob Merchant collection.*



*'SF' 5079 used for the carriage of bagged wheat. Photo by Arthur Perry.*

for the bulk carriage of wheat and a large number of the wagons were permanently converted with ridge poles and tarpaulins and classified CU. It was not until the 1940's (1942 to be exact) that the next improvement in wheat transport was to arrive; the vehicle was the RU wagon. A total of 650 were to be delivered by 1946.

The RU was a logical development of CU; with the same basic dimensions but improved hopper doors and a permanent steel roof instead of the tarpaulin. The arrival of the RU also brought the first of the modern 'block wheat trains'. The date was January 1943 and a D57 and 31 RU's left Wallendbeen on the Main South loaded with 27,500 bushels of wheat for Rozelle.

Despite the improvement in wagons the locomotives remained the same as those of the 1920's but the war years, as we have all read elsewhere, were to savage the locomotive roster and new steam and diesel locomotives were soon to appear. Along with the new motive power came the new bogie coal hoppers of the BCH type. The worth of these vehicles as wheat hoppers was soon realised and suitable roofs were fitted to a number of wagons in 1953. By 1970 there were 386 such wagons operating.

Tonnages of wheat however were rising year by year. In 1957 the railways hauled 95, 031 tonnes but in 10 years it trebled to 299,129 tonnes. However, by 1977 the P.T.C. was carrying 4.9 million tonnes, a factor of 16 in 10 years. In order to cope the railways introduced the aluminium WH and WHX wagons in 1965 and 1969 but, still, the lack of suitable wagons of sufficient numbers were a problem.

The shortages of wagons lead to such things as sheeted BCW's being used for wheat traffic when, previously, they were used for other coarse grains, a role to which the CU's were also officially relegated. Also, the new GJX wheat wagons of the Victorian Railways were used in 1969, and the following year SAR wagons of the SHBX type appeared on the N.S.W. metals. This last type were still common in 1977.

The strain on wheat hoppers was increased by the need to scrap some of the RU's which were now 25 years old. Relief came with our ultimate in wheat transport, the Goninan and Comeng built WTY 56 tonne capacity wagons in early 1976. By early 1978 the P.T.C. had the following wheat wagons in service:

| | | | |
|---|---|---|---|
| BWH | 41 tonnes capacity | 36 | in service |
| FWH | 41 " " | 335 | " " |
| WH | 54 " " | 182 | " " |
| WHX | 54 " " | 186 | " " |
| WTY | 56 " " | 530 | " " |
| RU | 24 " " | 370 | " " |

The total lift capacity, being approximately 74,000 tonnes, is 60 trips per year each to move the 1977 crop. If you remove the RU's which are now mainly used on staging trips on the branches to the sub-terminals at Werris Creek, Parkes, Temora and Junee due to their speed restriction of 40 mph, it is easy to see that each wagon must make more than one return trip a week in order to move the 'golden grain' from farm to customer or sea terminal.

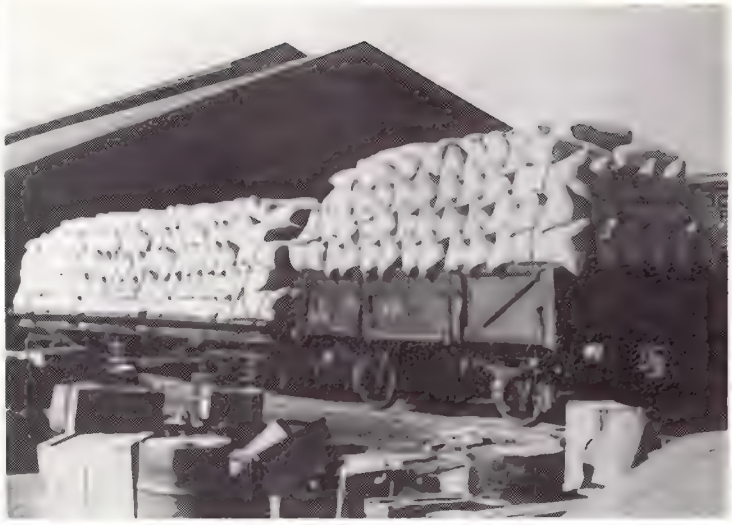
Locomotive shortages are also evident and the demands for wheat transport had greatly contributed to this problem. The solution has been partially found in the leasing of the three S.A.R. 830 class in July, 1974 and four A.N.R. GM12 class in February 1977. Hopefully, the new 80 class on order from Comeng will finally relieve the problem.

Great progress has been made since the day that the lone S truck left Ariah Park in 1917 to the present block wheat trains of 20 or more WTY's. Parallel to this development in transport was the development in storage systems.

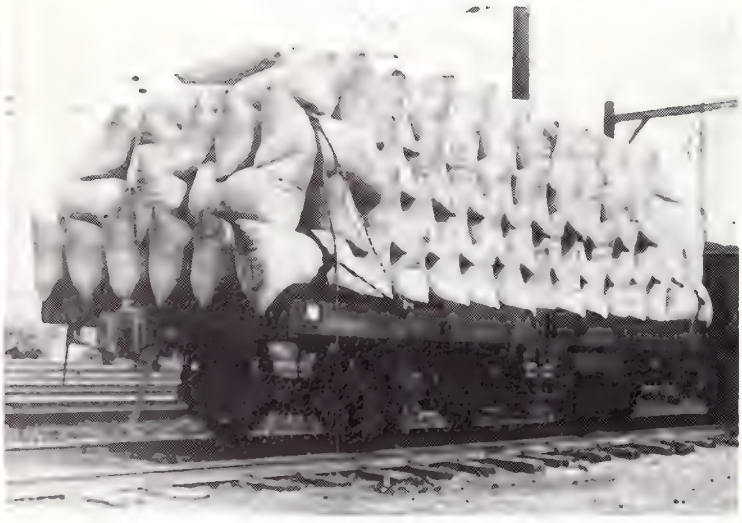
**The Storage**

The development of the wheat handling and storage system more or less lead the developments in transport by a few months. The bulk handling hardware was necessary prior to introducing bulk transportation on a large scale.

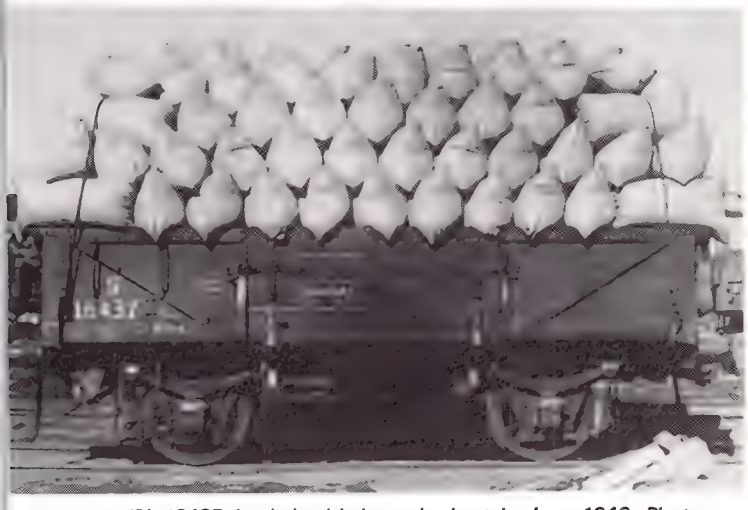
We have seen earlier that the first storages in country areas were merely bag stacking sites, the cover being provided by canvas



*ME and 'S' 18437 loaded with bagged wheat in June 1946. Photo Bob Merchant collection.*

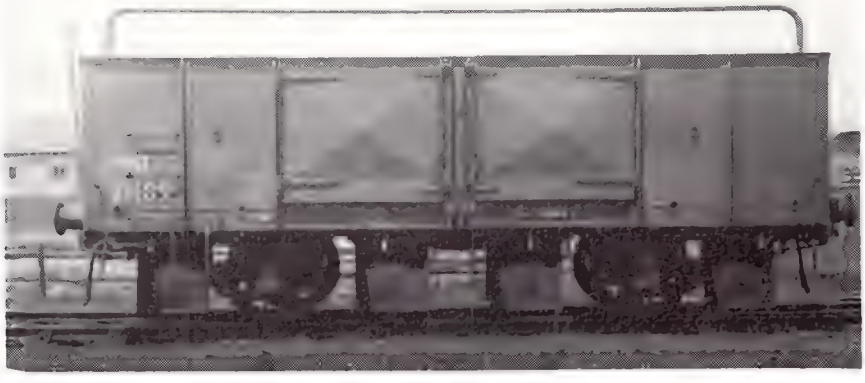


*Bagged wheat loaded on 'KF' 6757 at Bankstown in May 1946. Photo Bob Merchant collection.*



*'S' 18437 loaded with bagged wheat in June 1946. Photo from Bob Merchant collection.*

*Steel 'S' wagon loaded with bagged wheat (1946). Photo from Bob Merchant collection.*



*This NSWPTC photo of a 'U' wagon shows the 4 wheel vehicle with the hopper doors open and the ridgepole in place.*

*RU 4 wheel wheat hopper.*

tarpaulins, if at all. The logical development from this was the grain shed. This took the form of a large rectangular open sided and open ended shed with a corrugaged iron roof. These appeared around the turn of the century, the Molong shed mentioned elsewhere together with those of Stockinbingal, Manildra and Old Junee being completed in 1904. Dimensions varied and some were added to from time to time.

The first major development came in 1918 when Australia's first silo was completed at Peak Hill in N.S.W. It was a single vertical 50,000 bushel bin and was equipped with a temporary elevator. This installation set the pattern for development in N.S.W. resulting in circular concrete storage bins with associated bucket elevators to load the grain into the storage bin and to re-elevate it when it was required for loading into rail trucks. The Peak Hill unit was soon joined by others in the Riverina and Western Districts and by 1925 a total of 63 silos had been built giving a total storage in the country of 13.5 million bushels. The cost of this program was $3.6 million.

Parallel to this came the Sydney bulk terminal at Rozelle which was completed in 1921, and extensions completed in 1973. The capacity of this facility was 5.6 million bushels. The Rozelle Terminal was designed by J.S. Metcalfe & Co, built by H. Teasdale Smith and cost $3.3 million. The development in country areas continued and between 1925 and 1929 a further 34 silos were built and, by the 1933/34 season, N.S.W. has a total of 176. By the time the second World War interrupted work the N.S.W. system had two terminals, the second now at Newcastle, and 181 country elevators, the total capacity being 33 million bushels. The post war development began to follow a slightly different pattern. The vertical storage in the tonnage envisaged for the years to come was becoming too costly

*4483 and a 48 class double head an Up bulk wheat train between Blayney and Murrobo. 6/12/1977. WHX and WTY bogie vehicles can be seen in the consist. Alan Templeman photo.*

*'WHX' at Mascot after being used to convey the golden grain to Kelloggs for processing. Bob Gallagher photo.*

*Some 'WHX' hoppers are used as an advertising medium as well as being used by the Manildra milling company. Graham Ball photo.*

*'WH' hopper sparkling new. NSWPTC photo.*

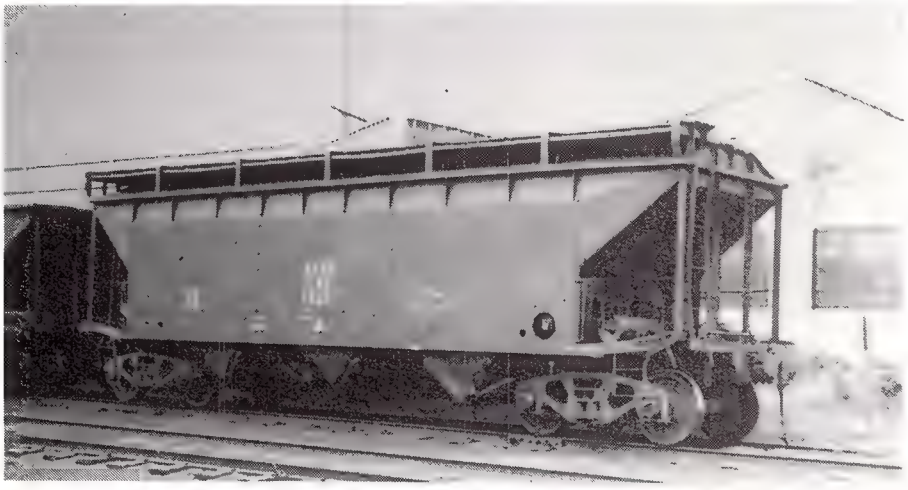
## EXHIBITIONS

**MITTAGONG — NSW.** February 17, 18 at the Old RSL Building, Regent St, Mittagong. Organised by the Berrima District Model Railway Club. Details (048) 61 2317.

**WERRIBEE — Victoria.** February 24th, 25th at RSL Club, corner Princes Highway and Synott St, Werribee. Open 1000-1900 both days. Admission 80¢/40¢. Organised by the Mont Valley Modelling Group.

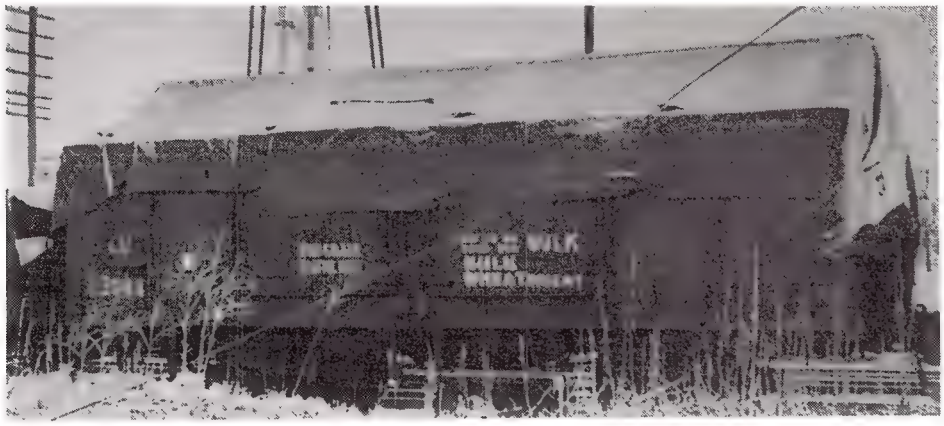
**MELBOURNE — Victoria.** March 9, 10, 11, 12 at Camberwell Civic Centre. Open Fri/Sat 1000-2200, Sun/Mon 1000-2000. Admission 90¢/40¢. Organised by the Australian Model Railway Association, Victorian Branch.

*BWH wheat hoppers. Graham Ball photo.*



*'FHW' (BWH with improved bogies), on coal duty at Botany in the days when the Bunnerong Power Station was in use. The wagons were hauled from the Botany sidings by an ex-NSWGR 24 class. Note the 'COAL ON LOAN' sign stenciled on the side. Photo by Bob Gallagher.*

*The latest bulk wheat hoppers are coded 'WTY' and are seen here in service (loaded) near Tarana. Bob Gallagher photo.*



*CU 23044 at Goulburn in 1969, clearly labelled "NOT for wheat traffic", the wheat carrying days being long gone. Bob Gallagher photo.*

so a change to horizontal storage took place. Several Type A depots were completed in 1955. These were concrete walled structures looking for all the world like a group of silos arranged in a circle. A large iron roof and elevator completed the picture. Type A depots can be seen at Gunnedah, Gilgandra and Narrandera.

Bulkhead storages, as they are officially known, also appeared during the 50's and into the 60's. These are timber or steel framed, corrugated iron structures. Horizontal storage was the method in these rectangular shed type structures. The idea was that they be temporary and be replaced by the more permanent steel and concrete type B, C and D depots from 1958 onwards. Capacity of these rectangular, horizontal storages varies from 250,000 to 1.5 million bushels.

The other major development of the 1950's was the building of sub-terminal elevators at four of the major railway junctions. The sites were Werris Creek (4.5 million bushels), Temora (5 million), Parkes (4.5 million), and Junee (4.5 million). The concept here was that wheat could be brought in from branch line silos and depots and stockpiled at the sub-terminal before transport to the main terminals at Bullock Island and Rozelle. Today this staging work is where the last 350 or so RU wagons are mostly employed, particularly working to the Temora and Werris Creek sites. During the 60's production rapidly increased, beyond the building program for the new type B, C and D depots. Temporary and emergency storages were resorted to and all forms of structures were used. Steel mesh bins lined with hessian, disused Army and Airforce stores in country areas, and wheat was even stacked on the ground and covered with tarpaulines or corrugated iron.

Today the storage facilities have a capacity of around 220 million bushels. When one considers that in 1965 the capacity was around 100 million bushels one can see just what a massive building program the Grain Elevators Board has accomplished in the last 10 years. In recent years the G.E.B. has completed steel storage of the vertical type similar to the 1920's concrete variety and experimented with inflatable and underground storages.

In closing the discussion on the storage I would like briefly to examine a typical branch line in the wheat belt, the Lake Cargelligo Branch. Between Temora (excluded) and the terminus at the Lake just 179 km away there are 12 storage sites with a total capacity of 9.0 million bushels. Finally, if you have not seen either of the main terminals at Bullock Island or Rozelle, go take a look and see just how large n area the Sydney (245,000 tonnes) and Newcastle (160,000 tonnes) storages occupy.

**The Model**

The aim of the preceeding prose was to condition the mind of anybody who is not convinced he should include wheat transport as part of his layout operation. I would not recommend you tackle a model of the Rozelle Terminal or even a sub-terminal like Werris Creek. The ideal location to model would be one of the few remaining sites where there is a small vertical concrete silo, or model an enlarged site as it was in the 1950's. These silos are easy to construct and add a vertical dimension to a layout which can otherwise only be accomplished by large scale mountain scenery. Various size cardboard tubes or, better still, asbestos cement pipes, are ideal raw materials. A.M.R.M. will feature such a site in a future issue. Wagons have been catered for quite well in the past, but I cannot guarantee current availability. However, if enough people ask about them they will return. The RU wagon was produced by M.R.C. models and also by Australian Transport Models. The BWH has appeared in the lines of Friedmont and A.T.M., the latter also indicated an interest in the later WH wagons. The CU can be readily converted from one of the many K wagons available. Plans of the RU/BWH are available from Data Sheets and the RU (Sept/Oct 1967), BWH (March/April 1971), WH (Nov/Dec 1970) and WHX (March/April 1978) have all been covered in A.M.R.M. Locomotives do not really need comment; use any N.S.W.G.R. locomotive and there will be a prototype record somewhere to support your choice. However,

as with the prototype, a model of a C30T plus 10 mixed RU's and BWH's together with a PHG van sitting in a wheat siding beside a Metcalfe silo is what really pleases the author.

In summary I can only say that this article merely touches the surface of the subject of railways and the wheat industry. The problem was what to leave out, not what to include. I can only recommend that on the next Easter weekend you take yourself out into the country and have a look for yourself. Visit at least one of the sub-terminals and a few of the silos in close proximity and you will share with me not only an appreciation of the railways role in the wheat industry but enjoy this great country of ours. Who said the wife and kids cannot share in our hobby? Remember on that trip to Temora though, Don't Rubbish Australia. Assistance in preparing this article was given by Mr John Forsyth of the P.T.C. Archives and especially Mr P.C. Marvell and staff of the Grain Elevators Board.

Reference is also made to the Australian Encyclopedia, A.R.H.S. Bulletin and N.S.W. Digest.

*A string of 'RU' hoppers await loading at the wheat silo on the old Illawarra Model Railway Club layout. Graham Ball photo.*

*4509 and 4514 near the top of the grade at Raglan with a loaded wheat train heading east. BWH's prodominate but a WH can be seen towards the rear of the train. 4/11/1967. Photo by Alan Templeman.*

*42103 heads west near Perthville with empty wheat wagons returning to be reloaded. 6/12/1969. BWH and WH bogie vehicles can be seen. Photo by Alan Templeman.*

*Weatherproof sheds, grain silos and loading gauge at Molong. Alan Garbutt photo.*

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## FOR SALE

**Enthusiast**, having at last finalised his layout design has various good quality items surplus to his needs. These include HO (Joueff), OO (Mainline) and EM (Scratchbuilt - convertible to OO & P4). Also available Mallard LNER coach kits plus numerous bits and pieces such as motors, wagon and signal kits, axleguards, W irons, buffers, etc. All at approximately English prices. Also for sale a collection of railway books —

*Continued on page 62.*

# LAYOUT DESIGN . . . . KEEPING IT PRACTICAL

(Murphy's Law and the modeller) by Phil Curnow

Let's suppose that you have decided to build a new layout and saw the perfect design in a magazine but it's for a room a little larger than yours. If you shrunk it by a few feet here and there will the new design introduce problems that make operation of the layout a chore instead of a pleasure? For that matter was the original design problem free anyway.

Of all the rules, laws and standards that can apply to model railways none has a wider coverage than Murphy's Law . . . . If anything can go wrong, it will. This piece of wisdom was supposedly formed by Edsell Murphy after his ex-girlfriend told him that he was about to be a father. Electronics engineers developed the law into a group of sayings for their profession but similar sayings can apply to our hobby as well. For instance . . . . any piece of material cut to length will be too short, a transistor protected by a fast acting fuse will protect the fuse by blowing first, plans and details will be in the least useable dimensions such as speed in furlongs per fortnight. The applications are endless.

Layout design is one area where remembering Murphy's Law can be of help. The main theme is to look for faults and problems and try to avoid them before you start construction. If you have track that is inaccessible without dismantling a lot of scenery then Murphy would say that no matter how good your trackwork is you will still get derailments in that section. Your most highly prized engine will eventually derail where it can fall the greatest distance to the floor. So we should aim to keep track easy to get at and put some catching device between the track and the floor.

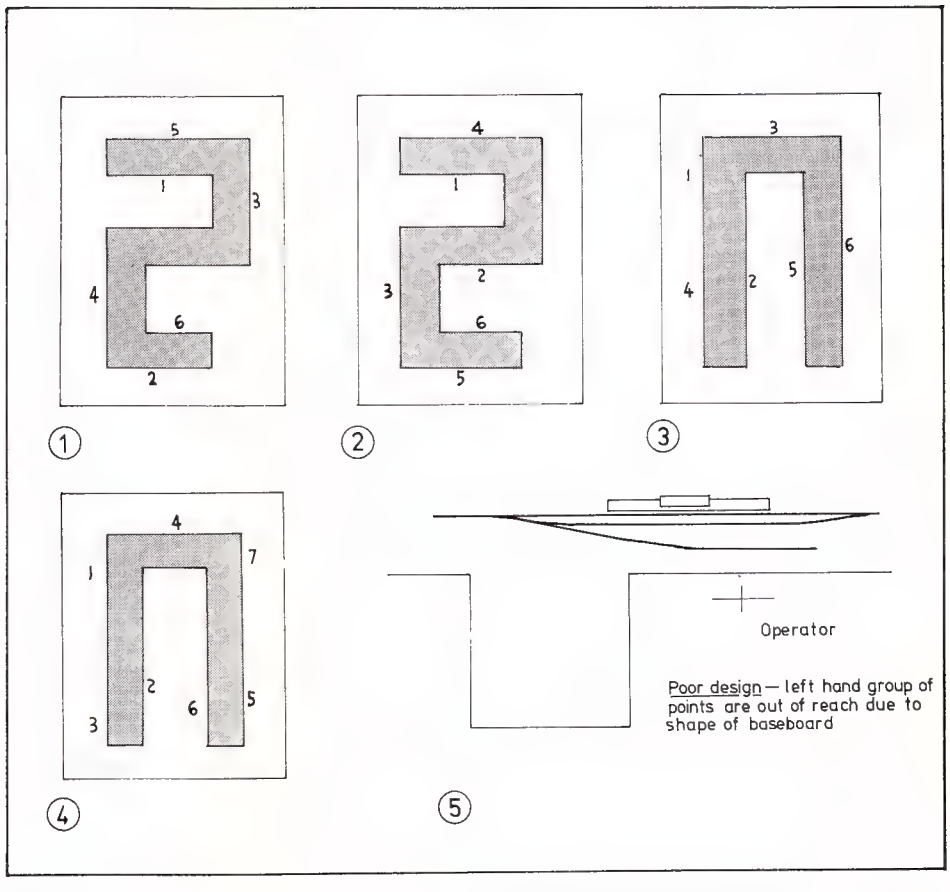
Please don't get me wrong because I am not saying that the suggestions that follow are right and all others therefore wrong. Obviously we all build layouts to suit our needs and all I ask is that you consider what follows. I've had the opportunity and pleasure to operate as part of a team on four large layouts, have seen quite a few others and I am presently involved in the design and construction of a 10 by 5 metre layout that will require eight operators. Noting the problems that occur and working out how to avoid them, talking to owners and operators, visiting new layouts with the aim 'what can I learn tonight?' plus hours of doodling with pen and paper has brought forth what I consider are practical do's and don'ts.

What makes a layout 'practical' and a pleasure to operate instead of a chore? Careful thought about the design is the basis and although I'll be talking about large H0 scale layouts involving several stations the basic ideas apply to layouts large and small.

**Walkways and Access Holes**

When you're looking at a layout design try and picture how many people will be required to operate it and what their movements will be. One at each terminus, two working mainlines, two shunting interemediate stations etc. If the design is for access holes you will need to consider what they have to do. The operators will whinge continuously if they have to frequently duck from one hole to another to work trains or pick up the pieces. You'll probably need one operator for each hole but what will occur if one or two don't arrive on the big night. Can the layout still be operated without making the operators 'duck under' all night.

For this reason walkways are more practical although they take up space where you may want to put tracks. Operators can be allocated a station as if they were in an access hole but they can also move around the layout easily on nights when some of the crew don't show. The problem with this 'one operator per station' idea is that it is difficult at times to keep each operator occupied during the night. On a wagon shunting layout if one stationmaster thinks slowly and takes a long time to shunt a train the next stationmaster will spend his time twiddling his thumbs or talking while he waits. When he talks he distracts someone else.




The way to avoid this problem is to design for an operator to follow his train around the layout. The space you allocate to walkways is critical here and also their shape. Look at the layout and note where the operators will have to walk as they follow the train. Although one person can easily stand in a 36cm. walkway it can prove difficult for another person to comfortably pass him, so you'll need nearer 65cm. Suppose your layout had a walkway and stations arranged as in fig. 1. Follow the movement of an operator as he walks alongside his train through six stations and note how often he passes the centre point. Now imagine another two operators are also following trains running in the opposite direction. Those walkways are going to be really busy and give the operators sheer hell. Fig. 2 is a slight improvement because it reduces the walking distance between stations. Fig. 3 is certainly an extreme case but however it is a popular shape with a possible sequence. Stations 1, 2 and 3 are close together as are 5 and 6 but to go from 4 to 5 means a duck under the centre section or a hike around the walkway. If your schedule asks each operator to do this four or five times a night the pleasure may be less than it should be. Fig. 4 would be an improvement as during the trip from 1 to 7 the operator progresses from one half to the other. These diagrams are only to explain what I'm talking about and are certainly not the best sequences. That is left for you to think about.

**Keep Within Your Reach**

Good ol' Murphy would have us expect derailments where they are hardest to repair. Where do derailments, stalled engines and other problems frequently occur? I find that derailments occur at points if the blades don't line up correctly because the mechanism has failed or because dust and grit stops the moving blades from making a good fit. Other causes are rail joints if they don't line correctly and the wheel flange can strike a sharp edge expecially on curves. Stalled engines are often the result of dirty track or sudden changes in grade as well as overloading.

If anything can go wrong it will . . . . so, no matter how carefully you lay the track, clean the wheels etc. derailments and other problems are still going to happen sometime. When designing a layout it is very practical to keep these problem areas within easy reach of the operator from where he usually stands. Several track designs I have seen in magazines have an area similar to fig. 5 where one point at the entrance to the station is out of reach of the operator unless he goes for a walk around the baseboard. Everytime a wagon derails or an engine stalls at the point he will have to get his feet into motion and you can expect his tongue to get a bit of the action as well. An example of this is the station called Centreville on page 62 of the July 1977 issue of Model Railroader.

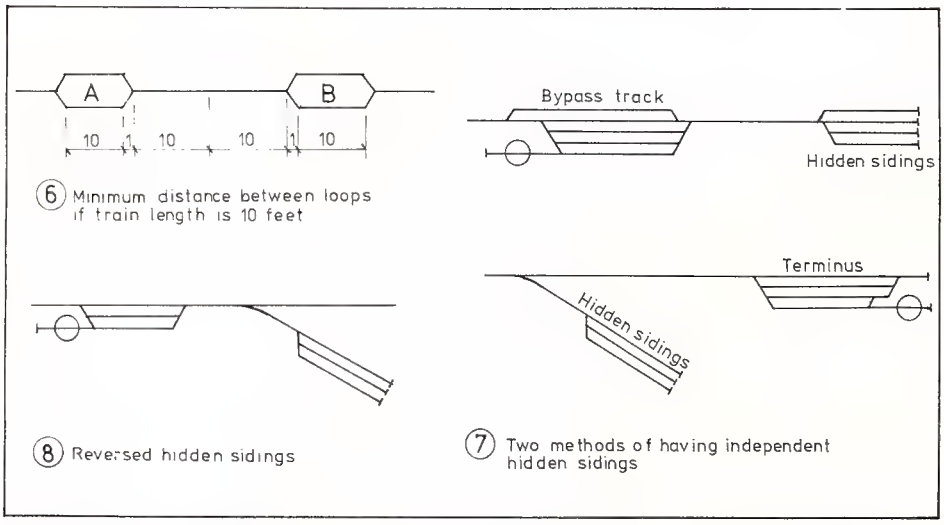
How far can you reach? You should keep in mind that when the layout is build up you will have to reach over buildings and trees to clean the track as well as pick up and rerail the occasional wagon. If you have to rest one hand on the layout you increase the chance of damaging your scenery. As a test it is advisable to stand beside a cupboard at the height you intend for your base board then, without bending your back, reach out and pick up a wagon and replace it on the track. The average person will be under 70cm reach and will be even less as the layout gets higher. So now we have our reasons for keeping the walkway or access hole within 70cm of a point, steep grade or sharp curve.

**Tunnels of Love . . . or Sorrow?**

Beside the practical uses of tunnels on a layout, modellers often show a fascination with them and try to use as many as possible to improve the scenic effects. Unfortunately the track inside a tunnel is often hard to get at. How to avoid problems in tunnels? Plan to keep the track as straight as possible with shallow grades and as you lay it make sure all joints line up and there are no sudden kinks.

Unfortunately tunnels on curves and gradients are often a necessity so I suggest that if you plan a tunnel between two stations then the grade through the tunnel should be about 50% shallower than the steepest section.

Now you can be reasonably sure that if the engine can haul its load over the steep section it should be able to get through the tunnel where you can't see if it has stalled. Similarly I design for a tunnel curve to be nearly 10cm larger radius than the sharpest curve in that section of track. Also you should avoid like the plague any change of grade within the tunnel. Operators can sometimes forget these traps for young players and leave an engine stalled with power on. By the time they wake up the motor may be burnt up. Lastly build a low fence on both sides of the tunnel track to stop derailed wagons and engines falling to the floor. You must still be able to touch the track within the tunnel because there is always a chance that an engine will lose a valuable part in there.



6 Minimum distance between loops if train length is 10 feet

8 Reversed hidden sidings

7 Two methods of having independent hidden sidings

**How Long Before it's too Long**

Although three diesels, thirty wagons and a caboose look really impressive as they wind through scenery this train size is not really practical on most layouts. It would be nearly fifteen feet (five metres) long so that a station where it is to be assembled or where it has to cross another train will need to have a Clear Standing Room of more than fifteen feet. Add to this about a foot for every point and very soon a three loop station is twenty feet long. You will need about the typical train length of track available at both ends of the station so that you don't foul the next station when you are shunting. This means two train lengths between stations and preferably more as in fig. 6. All of a sudden a 30 x 20 ft. shed is too small.

Unless you have a large room with few stations it is more practical to limit yourself to a typical train length of about six feet which gives average station lengths of about 10 to 12 ft and about 15ft between stations. Now you won't need to make so many laps of the room to fit in your stations. There are other reasons for this shorter length on shunting layouts. The more wagons in the train the more work at each station and the longer it takes you to complete a run which means a schedule will be harder to organise. Of course you can still run thirty footers if you arrange for all other trains to fit into the loops otherwise you will be faced with time consuming split crosses as used by the SAR on the Pirie line. On a model station you are more likely to get situations where there is simply not enough track and sidings available for a split and this can prove most frustrating.

**Hidden Sidings**

Some people call them hidden sidings, the Brits call them fiddle yards and I guess metricked Australians call them fiddlemetres. No matter what you call them one is virtually a must on all layouts because it gives the opportunity to develop a horde of industries and stations full of passengers without actually modelling them. You can run a greater variety of trains without storing them at the terminal stations. To avoid skinning your knuckles every time something goes astray in the hidden sidings you should design the layout carefully so that there is at least 15cm of clear space above the sidings. You need to be able to reach over a train on the front siding and fiddle with a train in the rear otherwise you have the task of removing the front train from the sidings, repairing the damage then running the front train back in again. Bit hard to explain as a scheduled movement. Make sure you can get at all of the pointwork very easily.

The design of the hidden sidings is also important. One descriptive article on John Allen's fabled Gorre and Daphetid said that the layout operation was limited by the traffic that the samll Port terminus station could handle. At first reading this seemed odd; however after looking at some larger layouts I see this is indeed true. You can have trains working at all the intermediate stations without causing too many hassles but when they arrive at the terminus everyone waits. Now the operation can bog down unless that operator can remarshall the trains quickly to get the other drivers out on the road again. As an answer it is practical to design your layout so that trains can run through to the hidden sidings without interfering with the terminal operator's other work.

John Gordon is using two different approaches to hidden sidings on his end to end layout which is currently under construction. One terminus is treated as a branch from the mainline so that through trains enter the hidden sidings without reaching the terminal station. This was done to allow that operator time to shunt his dual gauge yard. Refer to fig. 7 for a comparison of the two types and consider what is required if the hidden sidings are a reverse movement from the terminal station as in fig. 8.

**Round and Round, or End to End**

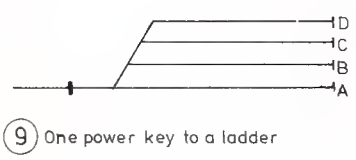
Up to now I have avoided discussing point to point versus continuous layouts because each is practical in its own way. The choice depends on your own likes and dislikes. If you don't know which to choose or you think that your ideas may change later then perhaps a compromise is the best for you. I believe that a large continuous run layout is chosen by people who like to see their favourite trains rolling through the scenery. Shunting or assembly of trains is just a necessary evil to make up trains so that the big show may continue. The point to point layout owner often has a different approach to his hobby. He has developed his chase after realism to the stage where he no longer enjoys seeing the same train roaring through a station repeatedly. Working from on end to the other of a layout gives him a sense of getting somewhere.

To combine the two types can have its uses as the continuous track in a point to pointer is useful for running in engines and occassionally as a display for visitors. The compromise is to design a point to point layout with several stations joined in a continuous run. Although this joining track can often be a simple crossover it is more useful to choose the joining points so that the loop is less noticeable. By increasing the length of this loop it becomes a branch that can be operated in either direction or split in two parts so that each end is a branch from different stations. When the layout is in use this joining loop holds a branch line train that works out to a station on the layout then returns later. A railcar that can be driven from either end can work from the layout onto the branchline then return in time for the branch train's return trip. You need to avoid driving a train onto the branch then having to pick it up to reverse the consist during the operating session. If you operate this joining section as one branchline it can be regarded as an old mainline that has been replaced. An operating problem you may introduce is to say that the mainline is blocked and all trains have to take the detour. Of course this track is lighter and rougher so an engine change, smaller loads and much longer travelling times will be required.

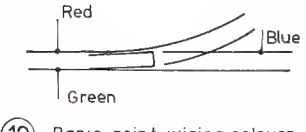
**Be a Bright Spark With the Electrics**

Unless you're the whizz kid expert type the electrical wiring is one place where your hopes and dreams can really come unstuck. If six of your mates turn up for an operating night a faulty engine or point motor can be taken out of service or repaired fairly quickly. If you turn on the power switch and the short circuit light shines like a real loco headlight life can be really unpleasant because electrical gremlins are often hard to find and not very obvious. For this reason I suggest you give a lot of thought to your electrical wiring.

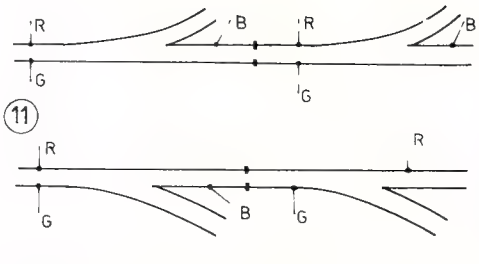
You need to devise a system that you will be able to understand very quickly two years from now without a refresher course in the meantime. I've seen several examples where the switch panel for a station is designed with the minimum number of power switches. Instead the track power is routed through the point motor switch blades and the result is quick and easy to use. However if you have a yard ladder as shown in fig. 9 and you place an engine on track D and it doesn't work



9 One power key to a ladder



10 Basic point wiring colours



11

12 Colour mixing in point ladders

where is the fault? After you've checked the engine to make sure it's a goer and that the controller hasn't quit you now have to check the contacts on each of the three point motors that combine to give power to track D. Checking three is not too difficult but six presents too many problems. I prefer to have individual panel switches for each track and not rely on point contacts. Although the operator has to throw more power switches it means you can easily isolate problems down to an area. In yard ladders one point still has to feed the next but I try to limit this to a maximum of three.

To avoid voltage drops across rail joiners which can deteriorate with age I loop pieces of wire joining the rails you may have problems if heat expands the rails. Similarly you are asking for strife if you solder the track joiner to the rails.

I use common return wiring because one rail is continuous throughout and you require less track feed wires. I make the rail nearest me the common and all wires connected to it are the same colour insulation so it is quickly identified from under the board. Similarly all feed wires attached to the other rail are the same while all frog wires are a third colour. My colour choice was green, red and blue respectively while other colours are used for power feed from the control panel so that they can be readily found.

I use live frog points because there is no dead section when you move an engine slowly whilst shunting. Fig. 10 shows my basic code while 11 and 12 show what happens in ladders where one frog feeds the power rail of the next point. If you choose to do this with wiring between point motors instead of rail joiners or looping you will be faced with colour mixing. To avoid confusion later I join pieces of red and blue together then solder the free end to their respective colours on each point so that if the motor is removed by someone else he doesn't find red and blue wires joined to the same lug of the motor. Fig. 12 is a case to watch as the blue and green are joined and you may forget what you are doing and connect the green to the common return so gaining a dead short whenever the first point is thrown. This probably seems confusing but I find that new chums can quickly identify wiring for a troublesome point and replace or modify it without problems. It certainly beats using the first bit of wire you lay your hands on which can become very confusing if you're tracing a fault while six action starved operators are watching and commenting rudely about your lack of progress.

Remember that common return wiring requires separate transformers because in certain conditions you can score shorts if you use two controllers from a common transformer.

I wire each station as an individual then any common or connecting wires between stations are fitted with screw on lugs rather than direct soldering. Remembering Murphy I want to avoid the problem of turning on power, finding the short circuit light is on and then having to unsolder wires in a search for the cause. With lugs I can quickly isolate whole section of layoutso that I go from a short somewhere in the room to somewhere in a particular station and then to a particular power feed and finally two rails which have expanded together. After all once your layout is fully wired and tested any future bugs in the system will be caused by odd things rather than errors in your wiring. You'll be looking for metal filings or track pins across point blades, heat expanded rails that can touch, broken wires etc.

If you decide to fit track detection, automatic signalling and other accessories to your layout try to keep them separate from the basics. You need to be able to pull plugs and completely remove any interference from your extras after they go wrong so that you can still complete an operating night by using the basics. Then you can fix the fault later when you feel inspired.

**And Now, at Great Expense . . . the Track Plan**

If you apply these suggestions to your proposed layout design they may rule out much of it or require major changes. The resulting plan may not appear as impressive but, because it is more practical in its design there is less chance of your trying to rebuild it later on to try and overcome annoying problems. By now you have some idea of what to look for and perhaps avoid when laying out the mainline.

When designing a station yard you need to know what you want to be able to do here as well as length of sidings etc. Is it to be a small, medium or large station as far as work for an operator is concerned. Will most trains be passenger or goods, and how many will terminate here? Are most wagons going to the one industry or are there several industries and of what type. On John Gordon's layout we found our answers by deciding to model a mainline running from a Port through some low hills to a farming district and then an industrial area. By looking at the type of Australian countryside John wants to model we were then able to plan the type of local industries that would supply the business at each station. For example a fruit packing shed in the foothills, wheat silos in the country and a mill in the industrial town. This then set the requirements for buildings and sidings at each station as well as giving the railway a reasonable amount of goods traffic. Many American authors say not to have your layout self-sufficient where the boces for a fruitpacker come from a mill at another station while the fruit is sent to a third station that you have modelled. Thier suggestion is to go the other way and have most of your sheds and industries fed by stations that are in the hidden sidings. This allows for a lot more variety in wagon movement and helps you avoid the sight of a wagon doing a shuttle service between two sheds on your layout.

Once you have designed your station on paper you need to do some practical tests. Assemble an imaginary train with engine, five wagons and brake. Bring this into the station yard and then follow the movements as the engine places wagons at each siding and picks up loaded vans then remarshalls the train. Do this for each direction. SEnd the engine for water and coal or if it's an infernal combustion type send it for oil if there is a loco depot. If you can do everything that you require without being short of room or loops then there is a good chance that your station is workable. Now you can check the position of each point motor to see that two don't need to be mounted in the same spot or in the middle of the goods shed etc. If you decide to change the track plan in any way redo your wagon movement tests because now is the time to find the problems rather than after the station is built.

If you run short of ideas on layout design the best source is to look at a railway near you that handles the type of traffic volume you propose. Failing that you may be able to get books of track diagrams which the railways provide for the use of their signalling and track maintainance gangs. You will notice that Railway track designers often adopt standard designs and aim for simplicity where possible to reduce maintainance costs. In contrast modellers will purposely include switchbacks, short loops and other traps for young players to make for variety. It may not be prototypical but it is one of the compromises that modellers often make however that is the start of another story.

# BOOKS

by John Bevan

It's not every day that a book of great interest to railway modellers appears that is illustrated mainly with photos of model aircraft with an occasional ship model thrown in for variety.

This book is one that I came across by chance. I was looking through a bookshop called "Book Traders" in King Street, Sydney one lunchtime recently when I saw this book. It did not attract at first as it was illustrated with a photo of a model biplane on the cover and a quick examination showed it to contain more aircraft photos inside. The bargain price of $1.00 however, convinced me to buy it and I have not regretted my purchase.

The author, Pieter Stroethoff, has by concentrating on a difficult subject to photograph shown us how to photograph all types of models. This allows him to show how to photograph model aircraft so that they appear to be flying. This is not done, incidentally, with the use of wire but by supporting the model with wooden blocks or simply on its wheels on a sheet of plate glass extending outside camera range. The correct lighting will cause the glass to disappear and the model will appear to be flying. Before you throw up your hands in horror and say "what has this to do with model railways", think. Isn't this a good way to photograph your good models away from annoying backgrounds.

The average railway modeller seems to be frightened by photography. He wants the quick answer to his problems. What is the camera to buy that instantly provides the perfect photo without any effort? The author tells us that successful model photography is a matter of care and experimentation. He discusses cameras, lighting, filters, and extreme close-ups. Each of these topics has direct relevance to model railway photography; some other topics such as the art of getting propellers to move and aerial photography are not so relevant but with some thought may have some use.

This book apparently sold for $4.95 when published in 1975. At that price it would be a good purchase for the modeller; at $1.00 it's essential.

**"Photography for the Scalemodeller" by Pieter Stroethoff. A.H. & A.W. Reed Pty Ltd, Terrey Hills 1975. ISBN 0 589 07166 1.**

# AMRM NEWS

**Compiled by Bob Gallagher and AMRM Staff.**

Despite the Editorial Comment this issue the subject matter for the January/February 1979 issue should interest a number of readers. Most of the articles have been in planning for over a year and one at least has been in hand for over two years as we strove to acquire the correct photographs. Although the articles are credited to singular authors the efforts of collecting some many details has been a monumental task covered by a large number of modellers. Hopefully a few readers will receive some inspiration from this issue of AMRM.

**Big Spenders!**

Recently hobby shops in Sydney have found sales rather quiet sales-wise, but a comment from one proprietor needs airing. Upon being asked as to why it was so quiet so close to Christmas he promptly replied, "It's that bloke out west. Everyone is buying his brass engines and do not have any money left for the incidentals."

Sure the remark was made in good humour, but there is value in the comment, for most if not all modellers have a restrictive budget and if most of it is spent on expensive engines, little will be left for anything else in the hobby. Maybe that is why there are very few layouts featuring Australian prototype in existence.

**Reviews**

One does not have to be too bright to observe that the REVIEWS column within AMRM is getting smaller and smaller each issue. The problem is that there is little to write about. All products reviewed are supplied by the trade and when products are not produced or in turn not presented for review there is little we at AMRM can do about it.

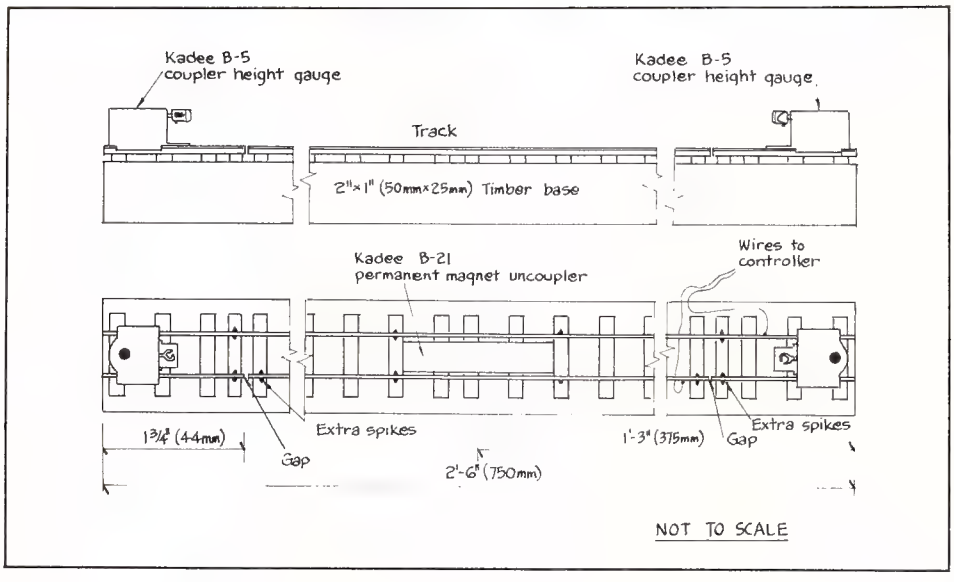
**Readers Award**

Following the lack of interest by readers we have decided to forgo the competition this year. This is despite the fact that one reader has already sent in his nomination and awarded the writer of this column his top points. Flattering but regrettably insufficient to change our mind. The normal judges awards will still be awarded, and should be published next issue.

Continued on page 54

# KADEE COUPLER TEST TRACK

Having had the privelege of running my own and other people's equipment, at home layouts and at exhibitions, I have found that many arguments have started and sometimes feelings hurt when people are confronted with the news that their wagon's couplers are not operating properly. I found this especially so at exhibitions when one is operating with people that one doesn't know too well. Drastic action was needed, so I came up with "Graham's *Gruesome Rollingstock Reject Machine*".




**Materials Needed:**

1—2' 6" piece of very straight good quality dressed timber, about ¾"×1½" (up to 2"×1" is OK and indeed the heavier timber may come in handy),
1—2' 6" piece of track of your choice,
2—Kadee B-5 coupler height guages,
1—Kadee B-21 between the rails permanent magnet uncoupler,
Track spikes,
Lacquer or paint,
2—woodscrews to mount the height gauges,
2—short pieces of wire to make electrical connections to track.

**Method:**

Seal the timber with lacquer to prevent any warping.

Spike the rail down in a dead straight line along the timber.

Two inches from the end of the track on one side put in extra spikes as in diagram (6), then cut the track as shown (5).

Assemble the coupler height gauges.

Position the uncoupler ramp half-way along the track and glue in situ using the height gauges to set it correctly. (If you have access to a Kadee Uncoupler Gluing Jig, all the better).

Set coupler height gauges in position at the track ends and screw down.

Solder the pieces of wire in position as shown in diagram item (7). This, when hooked up to a controller, is used when testing the heights and coupler delay action of locomotives, i.e. 1. I think it inadvisable to drag engines up and down rails with "frozen" drivers, and 2. some of the smaller tank type locomotives tend to find their own centre when running, which is sometimes slightly different from the position it is in when sat onto the track by hand.

The reason for the long length of track is so that you can check the heights and coupler delay action of long cars and wagons (the long passenger cars of yesteryear and today and the container carriers of today).

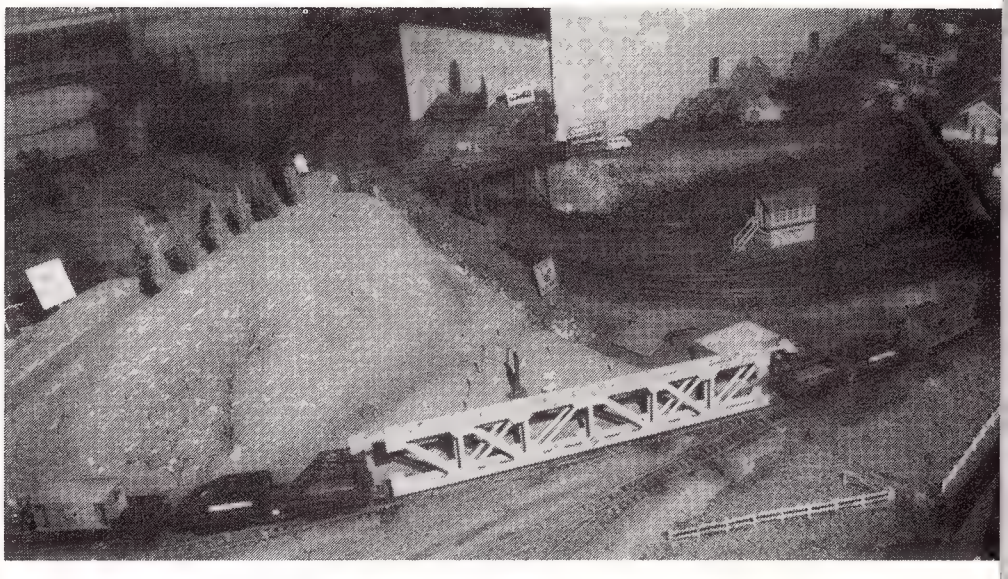
Two coupler height gauges? This is so that the wagons do not have to be picked up by the 0-5-0 shunter and turned round. I believe that the less the models are manhandled then the risk of breakage is minimised.

A word of advice. Be careful when you find that you have to use the test track at exhibitions (especially if the wagon is not yours), it makes you about as popular as the '78 Budget. If the owner of the failed wagon still persists in arguing that his wagon is OK, then pick up the test track and hit him over the head with it, end of argument. (I told you the 2"×1" would come in handy!)

An excellent article by Phil Curnow on fitting Kadee couplers can be found on Page 39 of the Jan./Feb., 1977 issue of AMRM.

*Neil Graham*

# THE MONSTER



'The Monster' was the code name given to the spans of a girder bridge being transported to its construction site.

Due to its size and overhang on curves, the girders were mounted on cradles which in turn were on counter-weighted flat wagons.

The girders were transported as a special train after careful route planning and movement time had been completed.

The model was constructed from two 'Airfix' kits and two modified 'Bachmass' four bogied flat wagons.

## BASIC CONSTRUCTION

### The girders

The girder braces were cemented hard up to the top and bottom rails and not on to the fixing studs. This reduces the height to 60 mm so that they are within the N.M.R.A. clearance when transported on the holding cradles.

The two right and left sides are joined together by the jointer supplied in the kits. Next, six of the bridge feet were cemented between the sides (at the top) and the two remaining were cemented at the bottom making a complete girder unit 380 mm long, 20 mm wide and 60 mm high.

A 2 mm square bar is cemented across the top ends as a pivot and support bar.

The two spare girder jointing bars from the kits are trimmed at the smaller end to 20 mm wide and a 2 mm hole is drilled in the centre of the end webs and a 2 mm hole is also drilled in the end feet between the top girder rails.

8 BA screws are inserted in the feet holes and the jointing bars are fitted as the support bars to hold the girders on the cradles. It has been found that if a nut was screwed down onto the feet before the bar is screwed down the bar pivots easier and, with the double point action, the girder can travel around a 460 mm curve with an inside overhang of 70 mm!

### The flat wagons

The four wheel bogies were replaced with two six-wheel ones so as to make the wagons look more Australian.

Two 'Roundhouse' tender bodies (spare parts box) were filled with putty and cemented at one end of the flat wagons to be the counter-weights.

The carrying cradles were made from the girder bridge ends, cut down and fitted with the overhead bridge spacer which is mounted 30 mm from, and parallel to the wagon floor.

The cradle sides are mounted 30 mm apart and a 'L' section is cemented on to the end. This is fitted with an 8 BA screw (and nut) which protrudes upwards to become the pivot pin. This holds the girders 3 mm off the rail head and gives an overall height of 70 mm for the girders.

The guards van of the train is freelanced from the 'Airfix' van mounted on a shorty 'Roundhouse' flat wagon. A small planked area is on one end and is made from the 'Roundhouse' planks which came with the flatie. The four-wheel loco is 'Lima'.

When run at the Brisbane hobby show on the Railway Modellers Club layout, comments (both for and against) made the time taken to produce this model worthwhile.

*Peter Kelly*
*Photo by W. Budd*

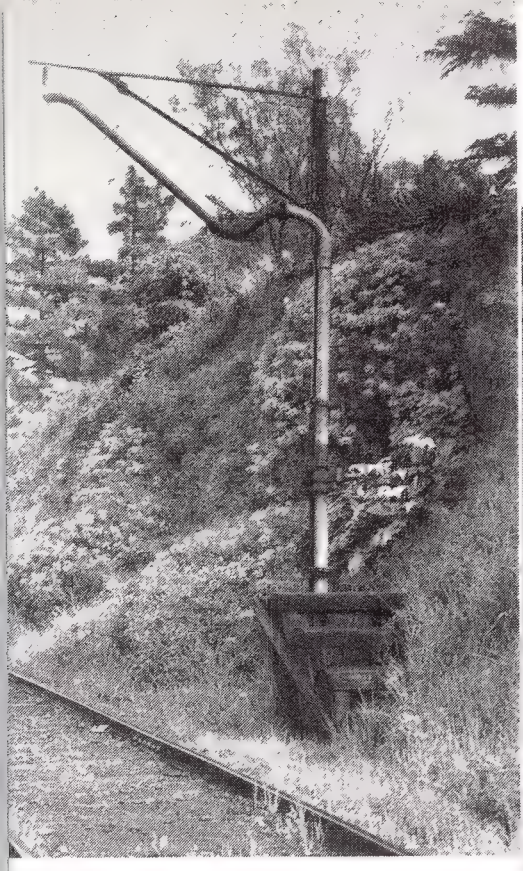
## N.S.W. WAGON COUNTDOWN — 2

In 1955, the N.S.W.G.R. had 249 MRC type bogie refrigerator cars available for service. By 1977, only 43 of this type remained on the N.S.W.P.T.C. register.

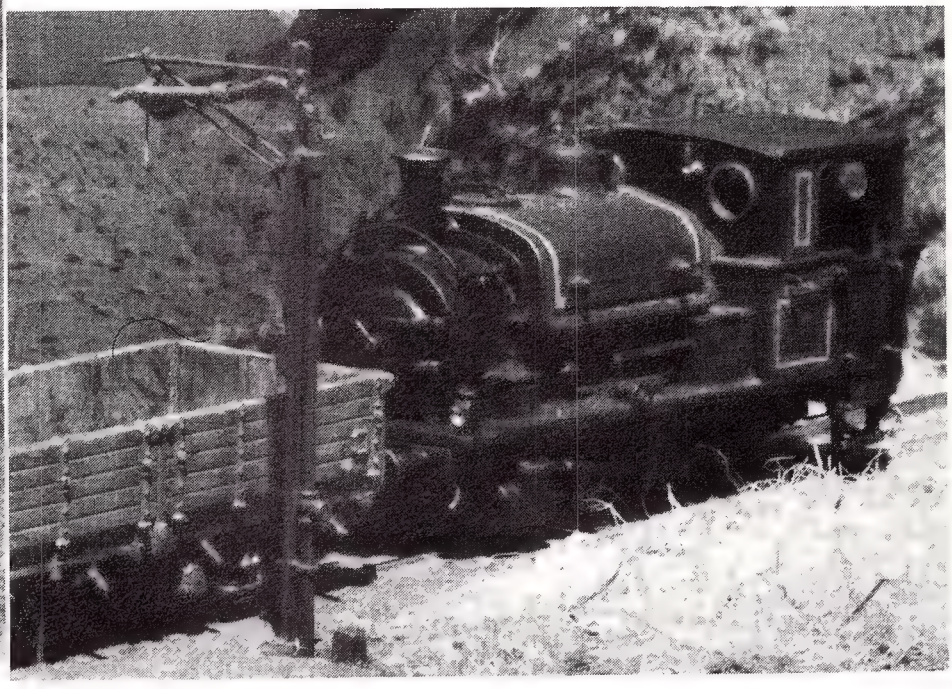
*Paul Rogers*

# THE BELAIR WATER COLUMN

by Jim Witherell



*The Belair water column in 1968. Photo by Peter Fellburg.*



*Water column in place on the layout. Photo by Ted Still.*

Watering columns generally convey an image of efficiency associated with big-time-steam; an image incompatible with many layouts, lacking in charisma. However, the Belair column offers a contradiction. Resembling more the art of salvage than plumbing, its modelling applications exceed its prototype tenancy at the Belair suburban station on the South Australian Railways.

The column derives its character from its components, so most dimensions are arbitrary for modelling purposes. Although I followed the prototype rather closely, variations were necessary to strengthen the structure which was built in N scale.

The upright is scrapped 60 lb. rail seated in a square concrete base. To the upright was bracketted a 5" diameter pipe coupled to an equal diameter tin spout by a ribbed, rubber hose that goosenecked through a hole in the upright rail. This hose provided all the flexibility required to raise and lower the spout. The spout was suspended from a supported bracket of angle iron welded to the rail and counterbalanced through a pulley on the bracket, and on the upright. The counterbalance was an 18" length of 60 lb. rail. Water flow was regulated by a globe valve with a 9" wheel. For an unknown reason the valve was 7' above the ground. Access to the valve was provided by burying a used crosstie vertically behind the column to form a step.

The single embellishment was a lamp with an uninspired, flat shade. A rotary switch near the base of the upright controlled the lamp, the switch and lamp connected by a conduit. Perhaps in testimony to the tidiness of engine crews, no drain was provided. Throughout its career it probably wore its uniform coat of rust which can be matched by a 50/50 mix of Floquil 'Boxcar Red' and 'Great Northern Green'.

This column is a subtle detail dominated by its surroundings, yet is a scene in itself when train movement focuses attention to it. It offers to any model railway an alternative to its usual watering service and the inference that the railway both generates and recycles depreciated assets.

# STEAM ERA — V.R. A Postscript

by Ian Cutter

The VR was the first railway system to be covered in this "Steam Era" series, which began in September 1975. Regular readers will have noticed that the articles have become successively more detailed in an effort to make them more informative. The purpose of this present brief article is to expand the original one to the same standard as the later contributions, while taking the opportunity to include references to some more recent articles.

The VR is well covered by books and booklets, but there are three which deserve particular mention as dealing with locomotives. The booklet "Power Parade 1854-1954" published by the VR in 1954 deals with every class of locomotive, and includes many photographs which appeared later in the chapter on locomotives in the official history "Victorian Railways to '62" by L.J. Harrigan. "Locomotives of Australia" by Leon Oberg (Reed, Sydney, 1975) devotes about 40 pages to Victorian steam engines. In addition, the 1904 diagrams book has just been reprinted by the Victorian Model Railway Society. A number of drawings have been published in the Australasian Model Railroad Magazine, which is now of course the Australian Model Railway Magazine. All are to 3.5 mm scale and most are accompanied by photographs. The classes and the corresponding issues are:

Na October 1965, S(4-6-2) January 1971, W March 1975, A2 May 1975, Y September 1975, P September 1975, O March 1976, Rogers D May 1976, A January 1977, N July 1977, Dd January 1978, and V September 1978.

The long-defunct monthly Hobbies Illustrated had drawings of D4 and A2 engines dimensioned for 7mm scale models.

The Bulletin of the Australian Railway Historical Society has carried numerous articles devoted to particular locomotive classes. The relevant issues are listed below, the classes being grouped according to wheel arrangement.

0-6-0: U November 1962, Y August 1963, Ry September 1963, Old R March 1964, Belgian R October 1964, X February 1965, Q November 1966, T March 1974, O February 1978.

2-4-0: K November 1962, F March 1974, No. 100 August 1976, B February 1978.

4-4-0: G July 1961, New A August 1963, D September 1963, AA August 1971, Old A January 1972, Nos. 162 & 164 September 1976.

4-6-0 Dd August 1966, W October 1976, S October 1976, D3 May 1977.

2-8-0: V March 1963, C April 1966.

2-8-2: X May 1966.

Tank engines: F March 1974, Na March 1977, Z April 1978.

The list includes only issues since January 1960, as being the most likely to be available, but a few earlier ones do deserve special mention. Weight diagrams of the B and O classes, which are not included in the later articles, were published in the August 1954 and April 1955 issues respectively, and the January 1958 issue was devoted to the A2 class.

The A2 also has a booklet to itself, "Locomotion A2" (Windsor Publications, Melbourne), which has about 50 pages of good photographs and a 7mm scale drawing. Another noteworthy publication is the 24-page "The N-class 2-8-2 Mikado Locomotives of the Victorian Railways" (ARHS, Melbourne, 1966) which includes a sectioned elevation and four weight diagrams.

Detailed plans to 1/36 scale of New A, Y and E classes, as well as some rolling stock, appeared in the magazine "Engineering" for December 1893.

These notes bring the story up to date at the time of writing (October 1978). As mentioned before, no attempt has been made to refer to any of the publications about the VR which are not specifically devoted to locomotives, but if any useful reference has been omitted I trust that somebody will write in to complete the story.

*This photograph shows Ted Thoday's EM gauge layout. The large radius curves and realistic arrangement of sidings enhance this scene. The telephone wires are made from fishing line, each insulator was drilled and the fishing line threaded through. Photo Jack Parker.*

# PERTH EXHIBITION 1978

Organised by AMRA, Western Australia Branch, the 1978 Perth Exhibition was held at the Subiaco City Hall, about four kilometres west of Perth city on Saturday 7th, Sunday 8th and Monday 9th October, 1978. Monday 9th was a public holiday in Western Australia.

The venue is a modern civic hall very similar to the venue of the Chatswood (Sydney) exhibition. The exhibition was spread over three levels, and there were twenty stands including three commercial.

The ground floor foyer accommodated three stands. The largest model in the exhibition was located here; this was a seven and one quarter gauge model of a Westrail X class diesel from the Castledare Minature Railway. This loco was one sixth full size, and quite a hefty piece of machinery. It was located not far from the main entrance.

Up two flights of stairs was a foyer, Main Hall and Lesser Hall which, together, held fourteen stands, these being the commercial stands and exhibits from various model railway clubs and private individuals. Probably the most interesting layout from a modeller's point of view was Ted Thoday's GWR branch line. This was a single track terminal to terminal, and about fourty feet long. A passing station with a loop was located in the middle of the run. Track and pointwork were handbuilt to EM gauge. Various types of goods and passenger trains were run, including push-pull units.

The Fremantle and Districts Model Railway Association's HO layout had some impressive rock modelling done with styrene foam. A granite cliff with glacial scratching (the glacial scratching might have been unintentional, but it was there all the same) and a slate quarry with precariously stacked rocks were well done.

AMRA showed two layouts, an N gauge with two hundred feet of track, based on USA practice, and an HO layout where the rolling-stock was completely changed every so often to represent Australian, European and American practice.

Other layouts included the William's N gauge. This layout had been deliberately placed in a dark corner away from natural light so that its lighting effects could be better observed. The buildings, the town square, the streets, the stations, yards, parks, signals, trains, all were lit up, and the lighting effects included a burning factory and fire engines with flashing lights. This was a very attractice well detailed layout.

Stan Andrews exhibited a module from his Denver and Rio Grande Western HOn3 layout. This was a station (Durango, I think) with a loco depot and freight yards. Nine feet long by eighteen inches wide, this was part of Stan's much larger layout.

*This is just a ver small corner of the Fremantle and Districts Model Railway Association's magnificent HO layout. The rocks are pieces of styrene foam glued together, and painted an appropriate slate-purple colour. Note the old trackbed. Photo: Jack Parker.*

In all, there were sixteen layouts amongst the various stands. The largest would have been the HO ones by AMRA (W.A. Branch), the South Suburban Model Railway Club, and the Fremantle Model Railway Association. The smallest would have been the N gauge circuit in one of Australian Model Craft's didactic showcases.

The commercial stands had the usual range of equipment on show. Rivarossi, Hornby, Jouef, Lilliput, Peco, Kibri, Superquick, etc, etc. They were all there, just about all the brands you would see at an Eastern exhibition, but there seemed to be a general lack of modeller's bits and pieces (this was later confirmed by visits to some of Perth's hobby shops). There would seem to be an opening here for some enterprising dealer. Prices, in general, appeared to be lower than in Sydney — I wonder if there's anywhere in Australia where prices are DEARER than in Sydney?

The upper level provided accommodation for the film show, the modelling clinics and the refreshment bar. The area was basically a large foyer and balcony overlooking the Main Hall. The film show was quite varied, but there was just a little too much light for really comfortable viewing.

The modelling clinics were on tree making, basic scenery, hand making points and trackwork and white metal kit assembly. These clinics were a very good feature; seating was provided but they were very popular and it was a case of standing-room only most of the time. The individual clinics lasted about one half to

three quarters of an hour and each was run two or three times per day.

Then there was the refreshment bar. You could buy tea, coffee, hot dogs, sandwiches, sweets, cakes, and so on, and consume them at tables overlooking the Main Hall. This was very relaxing and, incidentally, the place where the notes for this report were made.

Criticisms — well, not many really. The lighting was a little meagre. as it always is in halls of this type (shades of Chatswood again), but most of the stands had anticipated this and provided their own floodlights. The barriers around the stands were assembled from ordinary builder's scaffolding. This made for good strong immovable barriers, but the pipes were grubby and the brackets holding it together were greasy. Only one stand was thoughtful enough to cover it up.

I observed only one or two breaches of what might be termed "exhibition etiquite" — things like leaving a pair of pliers on top of the mountain, or parking an out of service loco in the middle of the main street. But this kind of thing can be seen at all exhibitions.

At least two of the layouts ran random mixtures of Australian, British, European and American rollingstock and locos. This would raise eyebrows in some quarters, in fact, some of the more sensitive types from the east would have probably keeled over on the spot! But I don't really think any adverse comment is called for at this stage. This mixing of different prototypes should gradually be minimised as the people involved learn about exhibitions, and more rollingstock becomes available for exhibition use.

The layouts in general ran very well; there was very little of the finger poking you can sometimes see at eastern exhibitions, where brass locos are common. A couple of the layouts ran examples of WAGR standard guage vehicles, but it is apparent that most modellers of Australian prototype in Western Australia base their modelling on NSW railways.

The exhibition as a whole had a much more convention type of atmosphere over the exhibitions in Melbourne and Sydney, and the people staffing the stands and running the exhibition were universally polite and friendly. Access for the public was good, with plenty of circulating space, and there was an ample car park just outside the hall.

Organiser Tony Gray and his team are to be congratulated on a good exhibition.

The exhibition is held in the wildflower season, the time when most eastern tourists visit the state. To any easterner contemplating a trip west, I urge you to pick a time to coincide with the exhibition, and don't miss it.

*Jack Parker*

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# MAILBAG

Sir,

In reference to Ian Thorpe's letter in the September/October issue of AMRM complaining about the 400% price increase of Berg's latest 32 class, as from the original run. Does this gentleman realise that the purchasing power of the Australian dollar in relationship to the Japanese Yen has fallen in excess of 50% in the past few years. Taking into consideration production and labour costs have risen well over 80% in the past 8 years, coupled with 50% rise in interest rate over the same period. The average modeller forgets that the importer of Australian prototype has to put up $60,000 plus in order to produce the model, usually 50% on borrowed capital. Then he has to put 100% mark-up ex-factory plus pay 58% import duty and sales tax.

One has no alternative but to put such a high price on this locomotive with very limited local market demand to make it an economical proposition. The only way I can see us ever getting a cheaper locomotive is to have the import duty removed or reduced or by increasing our population tenfold in the next decade. Therefore, we would have more modellers and greater production runs, hence cheaper brass locomotives.

The Australian modellers do not realise how well off he is. Having just recently returned from an overseas trip to Great Britain with its 53,000,000 people, and up to last August had only produced two brass locomotives for the British modeller, then at a price 15% more than you would pay here for a comparable locomotive.

One can only feel humble to thank both Messrs George Berg and Peter Duckett for producing numerous fine Australian brass locomotives over the past 14 years.

*Chris Heazlewood,*
*Epping, 2121.*

*The facts and figures put forward by Chris do give some indication as to why the present day brass locomotive is, to some, a little pricey, but Chris has unfortunately debated only one small section of Ian Thorpe's letter, which seemed to question the value for money aspect of the models now available. The sales record of Australian brass locomotives has shown that modellers will not hesitate to purchase an accurate, well built and detailed model, no matter what the price. Just look at the recent run of the C38 and AD60, which seemed to sell out virtually immediately upon release. Unfortunately, the same sales action has not followed for the locomotives that have not been as well finished and that do not even look like the prototype they are supposed to represent. This latter aspect is in the importers' basket and is not answered by Chris Heazlewood's letter.*

*The comment about the British modeller being worse off than Australian prototype modellers is ludicrous, for the British have a cottage industry that can supply a hand-crafted model to accurate proportions at a fraction the cost of the imported brass models, so why should they want them. The cost of the British brass was most expensive (in comparison) when relased in Australia.*

*There is little doubt that Australian prototype modellers are happy that Berg's and Dockyard have endeavoured to promote the Australian scene, and no doubt both firms have made a healthy profit. That is their right and no one is denying them the rewards. They do, however, have to stand by their product; if it is a good one they can take the bouquet but if it is a poor one they must expect to take the knocks. It is incredible how some in the hobby want to deny others the right to question or debate the price or quality of a model.*

*Ed.*

Sir,

Further to the article on the Cooma Mail in the July/August edition of the AMRM, I would like to add two more compositions which had to cater for a school trip to the Jindabyne Sport and Recreation camp. On November 24 the Cooma Mail left Sydney with LLV 11058, LHO 1623, MCS 652, MCE 658, BS 2154, SDX 176, MCE 582 and 4421. It was interesting to note that 4421, a mainline unit, was not changed at all on the trip. On the journey back on December 1 was headed by 48125 and had RFV 693, SDX 176, ECM 805, 2142 and MHX 2644 in tow. The 48 class was also unchanged.

I would also like to state that I DO NOT play trains despite my comments in the above same issue. If you enjoy your facet of operation that that is it — the preference is yours.

In conclusion, I would like to heartily congratulate the organisers of the Sydney Model Railway Exhibition for displaying one of the best exhibitions I have seen. I would greatly appreciate an article on some of the better exhibits at this exhibition which were of an exceptionally fine standard.

*Bradley Hinton,*
*Wahroonga 2076*

Sir,

I would like to make some comments on the current debate between the "rivet counters" and the "commercials". Frankly I find it a bit boring as I have been reading about the debate for years in the British model press. Still, I would like to make some points which may clarify things:

It is invalid to consider one form of the hobby superior to another. Clearly fine scale modelling requires much skill and patience (having modelled NSW in HO for a number of years I have no doubts on that score), but considering the range of skills needed (and money) it is not an option for everyone. It is interesting to observe that the complete NSW railway "scenes" which we have seen at exhibitions are usually the work of a group of modellers!

Each approach to the hobby has an associated "vision" of some sort. Let me explain. I gave up modelling NSW prototype because of the frustrations involved. Partly because of the difficulties of getting everything to a common standard of workmanship (it annoyed me to have a well built brass locomotive followed by a crudely cast S truck) and partly because there was always some part of the model which was not right or not to scale (eg the frogs on points, or the tiebar). I found it an impossible dream to create an exact scale model of a significant bit of the NSW railways. That was my initial reason when I started in the hobby.

I now model N gauge American with an emphasis on operation. (The ability to be able to buy a complete range of locos, passenger carriages and freight trucks, ready to run and to a similar standard attracted me to the American scene.) Obviously many of my previous problems have disappeared but a new set of problems have presented themselves. On an N gauge layout there are parts of the model which can never be to scale; wheel flanges, rail size, couplers, points (or turnouts), etc. So in N gauge one cannot think in terms of a miniaturisation of the prototype (as those modelling NSW do) but in terms of a miniature. railway with its own standards (chosen by me). This means that the decisions I make (about the presence or absence of ballast say) cannot, or need not, be determined by what happens on the prototype. I need a different vision for this. To express my vision very crudely I am trying to create a railway where the rolling stock is emphasised and everything else (track, buildings, scenery) is toned down. I am definitely only modelling inside the proverbial "railway fence". To turn my vision into reality requires care, skill and artistry.

Although I have talked a lot about what I am doing, I hope I have been persuasive in establishing my proposition that all forms of the hobby require artistry and skill.

Now some layouts are better than others, but not because of the type of layout. Anyone who has been to a model railway exhibition dismisses some layouts and spends hours looking at others. At least I do. The layouts which "grab" me are not necessarily those which correspond to my modelling area (American N gauge), but ones which have these two characteristics:

(a) The workmanship is to a high standard. There can be little satisfaction in looking at something which has been thrown together. If the layout looks like it could have been made by my 6 year-old son (as some layouts do) then I am not interested. This criteria exists in all art form. On the other hand, a simple oval, with commercial rolling stock can maintain my interest if the track is expertly laid, ballasted and spray painted and the rolling stock coupled with Alex Jackson couplers. It is how well something is done that matters.

(b) The builder has some recognisable vision which he has been able to get across in his model. This is very difficult to explain because it is not a tangible characteristic. If a layout possesses both characteristics it can be out of this world. Obviously one vision is to capture, as well as possible, a non-trivial section of NSW railways. "Stanwell Park" and "Menangle" are well known examples of this.

Another vision is to create a layout which is reminiscent of early model railways but built to a higher standard.

The British modellers who model live steam outdoors (with say Archangel models) have another vision. All great layouts have a vision behind them. I was reminded of this when looking at an exhibition of Lindsay paintings. There were paintings by Lionel, Percy and Norman. They all had different style, and were all skilled. But it was Norman who had the vision (the others just painted what they saw). And Norman was the great painter. (Lionel, Percy and Norman were just three of the famous ten brothers of the Lindsay family. Ed.)

In conclusion, let us finally recognise the naivety of judging a layout by the number of rivets on a locomotive. Rather, let us consider a layout good if the workmanship is of a high standard and outstanding, if in addition, the modeller has a recognisable vision which he was able to spell out through his model. Further, if the modeller has not had the experience to produce work of a high standard or has not been in the hobby long enough to know exactly what his vision is, let us say nothing critical.

*W. John Watson,*
*Armidale, NSW 2350.*

Sir,

Could anybody tell me if there are any model railway clubs operating in the Epping area, and if so are they open for new members.

*Patrick Ling,*
*16/723 Blaxland Road,*
*Epping, NSW 2121.*

Sir,

I am trying to model Hornsby Railway Station and would like to know if you could inform me if any hobby shops or companies sell HO models of the NSW suburban electric stock. If not, can you please tell me if and when the AMRM has published HO plans for them. Your help would be greatly appreciated.

*R. McKechnie,*
*West Pymble, NSW 2043.*

*HO models of these cars were manufactured by Cyclops some 15 or so years ago and released under the old Triang brand name. Needless to say they are now as scarce as hens teeth and bring quite a tidy price on the secondhand market. There has never been any HO drawings produced (except for the Data Sheet on the Bradfield car — available from most of the larger hobby shops). Ed.*

Sir,

Some issues back Alan Brown in 'Comment' made some remarks concerning outdoor layouts in Australia. I recently concluded some experiments on this subject and for what it is worth would like to pass on the results.

After moving to my present address and not having space for a worthwhile indoor layout I decided that I would carry out some experiments into the possibilities of building an extensive outdoor system using Peco nickle silver track. I started off by laying down a few lengths of track and over a period of some months I eventually had an oval of track giving a continuous run of about 30 metres. To test Peco points under outdoor conditions a passing loop was installed on one side of the oval. The track was laid on a low concrete wall for most of its length and the remainder on timber. The track was not fastened down but was allowed to move freely with expansion and contraction. Rail joints were made using the standard nickle silver rail joiner. Some of the rail joints were bonded using 15 amp fuse wire whilst the remainder (most) relied solely on the rail joiners for electrical continuity. No track sections were incorporated and track power has fed through a single wire soldered to each rail. Controllers used a different times were of the simple resistance type and two commercial varieties of electronic controllers with simulated inertia.

Results of the experiments were interesting, if somewhat inconclusive as the experiment was abandoned after slightly more than two years.

Expansion and contraction of the track did not prove to be a problem provided that the track was laid on a gentle curve. It was impossible to lay straight track and have it stay straight.

Voltage drop throughout the whole length of the track was not a problem.

Unbonded rail joiners gave no trouble.

The track remained reasonably clean and required little attention if used regularly (7 to 10 day intervals). When not used for periods of serveral weeks a quick rub with a Peco track rubber of fine wet'n'dry paper soon had trains running.

The Peco points required little attention although it was necessary to clean the inbuilt contacts from time to time to ensure that they switched the current according to the direction in which they were set.

After a period of some months including one summer it began to look as though an outdoor layout was a practical proposition. Little running was done through the following winter and when it was desired to run trains again during the next summer it was found that the track was under gauge at almost every rail joint. The retaining lugs holding the rails to the sleepers had loosened up near the ends of the rails. This problem was overcome by soldering a piece of PC board under the rail joiners at each joint whilst the track was held to gauge.

The problem which caused the final abandonment of the idea of an outdoor layout occured towards the end of the second summer — the rails began to come adrift from the sleeper bases as the holding lugs broke away. At first it looked as though only one or two lengths of track were affected but it soon became apparent that all the track would go the same way. At this point the experiment was stopped and the remainding track lifted.

I concluded that although Peco track has a life of many years when used in outdoor layouts in climates such as England, the expected life of the sleeper base under Australian conditions is only about two years. This was confirmed for me by a modeller from Canberra who had a similar experiment — his track started to fall apart after being outside for two summers.

Surprisingly the plastic base of the turnouts does not seem to be affected in the same way although it does take on a very weathered appearance.

Subsequent reading and thought on the matter has lead me to believe, yet to be proven, that if an occasional Peco sleeper was replaced with a PC board sleeper the track would be held in gauge and the plastic sleeper base would then become decorative rather than functional. The PC sleepers would need to be fitted whilst the track was first being laid as once the breakdown of the plastic occurs a little handling leaves you with two separate lengths of rail and a useless plastic sleeper base.

*John H. Thomas*
*Wodonga*

Sir,

My name is David O'Brien and I am intending to set up an N gauge layout. I am writing this letter to enquire if there are any companies who manufacture any Australian locomotives and rolling stock. If any do, where can I obtain them in Adelaide?

*David O'Brien,*
*Pooraka, Adelaide, SA 5095.*

*Sentinel make a model of the NSWGR C38 class locomotive and MRC make a good range of rolling stock (NSWGR). I suggest that you enquire through your local hobby shop. Ed.*

Sir,

After the disappointment of the 1977 Sydney exhibition the 1978 Showground exhibition has restored my faith in the need to make the trip from here to Sydney. The idea of running the exhibition in conjunction with other activities at the Showground was excellent.

If the exhibition area was somewhat crowded at times, that at least might have ensured a financial success. A larger site might be available next year, if the exhibition is again to be at the Showground.

One criticism of earlier exhibitions has been the number of retail outlets involved. It will always be a matter of personal judgement as to whether they should be excluded entirely, or what is the right mix *between shops and layouts. For those who argue in* favor of total exclusion, could I make the point that for somebody like myself, a major justification for making the trip is to be able to see several shops in one central location over the weekend. For us country types, access to a variety of shops is not all that easy.

A lot has been said about the way trains should be run at exhibitions. The argument will no doubt continue while ever there are layouts and exhibitions.

I believe in a rather 'free' approach to operation at a public exhibition. It seems to me that compromise is needed for exhibitions of the type mounted at the showground, where the vast majority of people going through are perhaps seeing these types of more sophisticated layouts for the first time. The acquaintance of many people with model trains has probably been to watch them go around a circle on the living room carpet.

One of the objectives of an exhibition must be to try and attract these people to become future modellers. They begin with an interest limited to watching trains go around a layout, and perform some basic shunting movements.

The subleties of strict prototype operation can be lost on those uninitiated in the hobby. It will lead to boredom and the loss of a future modeller.

The compromise involved is to find a happy medium. Trains charging around at 200 miles an hour is not part of that compromise. But presenting an appealing show to those who have paid money is part of the compromise. A successful exhibition involves some of the razamatazz of showmanship.

*Graham Howard,*
*Press Gallery,*
*Parliament House,*
*Canberra*

Sir,

I have read with interest the claims by various correspondents of imported brass loco rip-offs. Why stop there eg. imported magazines.

The UK magazine "Everyday Electronics" has a price tag of 40p. It so happens that a price of Australian 75¢ is also printed on the cover.

"Model Railways" has a price tag of 40p as does "Railway Modeller". However, the Australian price is not printed on the cover.

For "Model Railways" I am charged 95¢ and for "Railway Modeller" the price is $1.15!!

WHY?

*A. Willox,*
*Launceston, Tasmania 7250*

*I haven't got a clue, but it sounds like the start of a real good argument, so count me in. Who is going to answer it for us? Ed.*

Sir,

After reading Ian Thorpe's letter in the September/October issue AMRM I feel compelled to write about a similar situation in the proprietry model field. For the past 25 years I have been actively purchasing model railway equipment and during that time have amassed a satisfying collection of proprietry equipment. Starting first with Hornby Dublo three-rail, then two-rail and more recently Triang — now Hornby — models make up the bulk of my collection. Recent additions include the new Airfix, Lima and Mainline models.

The current prices being asked for the present range of Hornby OO models is the subject of my complaint. The top-of-the range model, Britannia now has a recommended retail price of $74.98. To my mind this is excessive when compared with other locomotives in the Hornby catalogue and other brands of equivalent size locomotives. For instance the Hornby "Flying Scotsman", "Duchess of Sutherland" and "King Edward I" locomotives all retail at $59.98 — fully $15.00 cheaper and still "top" express locos and good quality. On the other hand the Llma "King George V" sells for $47.50 and the Airfix "Royal Scot" sells for $49.95. These locomotives too are just as good quality and appearance wise as "Britannia". A similar disparity in the prices of diesel locomotives can also be noticed from the price lists. Further down the range,the lvatt 2-6-0 locomotive is priced at $59.98 compared to $49.98 for the larger (in size) "kneller Hall" and other 4-6-0 engines.

Carriages and wagons also retail at inflated prices when compared to similar models in other makes, another difference here being that the other make is generally closer to scale and more realistic in appearance. The classic comparison with carriages is to compare the Hornby Mark III carriage in the HST set with the Joueff product. Not only is the Joueff carriage scale length but it is approx $1.50 cheaper. This list could go on and on and include comparisons of track and even lineside structures.

What can the proprietary enthusiast do about all of this? There would be few options open to him. Firstly, he could forget about English style models altogether and setle for the good quality American outline models made by such firms as Atlas, Athearn and Rivarossi. If he did this, he would find that Rivarossi make a superb Pacific locomotive which sells for $75.00 — only 2¢ more than the "Britannia". He would also find a vast renge of diesel locomotives priced well below the $44.98 asked for the Hornby class 47 diesel.

Secondly, he could stay with the English style models but confine himself to such makes as Lima, Joueff and Airfix. He would probably run them on Peco or Shinohara track and save even more money.

A third choice, and probably the best, would be to model Australian prototypes and help boost the small sales of these products.

It seems to me that until the above-mentioned prices are adjusted to bring them into line with what is now the cheaper and closer to scale alternative makes, many people would not be able to justify purchasing these products. Inflation is a word that is with us every day, but excessive inflation such as I have outlined above should not be tolerated by any serious collector or operator of proprietry model railway equipment. I should point out in conclusion that there is one good feature of all the above-mentioned equipment and that is that unlike the brass locomotives mentioned by Ian Thorpe, at least the proprietary ones can all be counted on for reliable performance.

*David Taylor,*
*Sydney.*

Sir,

I am a modeller of NSWGR in N scale modelling in 2 mm:1 ft. When will us N scalers start getting N scale plans in AMRM? It would be great to work off an N scale plan instead of redrawing it from HO. I don't known about any other NSW N scalers but redrawing the plan in N usually puts me off for a while on modelling projects. For instance, the ACS cars plan. I redrew that to N (2mm) scale and some 6 months later I decided to retry building one (about a month ago). The result — that's the last time I'll try working the way I was with ⅛" acetate.

Would it be possible to have Terry Clark's article 'Australia 'N' One' reprinted, for the issue in which it appeared is now out of print.

*P. J. Kirkbridge,*
*Harris Park, 2150.*

*There is little chance that AMRM will ever print a plan to 2mm scale for after a consensus of opinion among AMRM readers the most common 'N' scale in use is the 160:1 scale. While there is some 'N' scale preparation in progress AMRM, for the time being at least, does not plan to reproduce plans in 'N' scale. This is not a stand against 'N' scale but the plans prepared for AMRM are at present drawn to 7mm scale and then reduced to HO (3.5mm) scale. The reduction allows for finer linework and in all a much better plan. Further reduction to N scale not only reduces the clarity of detail but in fact completely removes some linework. There are, however, a few methods of modelling that avoids redrawing plans to a specific scale. One method requires two scale rules, one to the plan scale and the other to the scale being modelled. The process is to measure off the plan with one rule and transfer the measurement to the model with the other. One other method is to have the plan reduced (at a plan printing/reproduction centre) to the scale required. There is no plan at present to reprint any article printed in AMRM over the last eight years.*

*Bob Gallagher.*

Sir,

In answer to a question by F. G. Farmer in the November/December 1978 issue of AMRM the colour and in some instances the name of some NSWGR steam locomotives is published in the NSWPTC data book 'Steam Lomotive Data', available from the Archives Department of the NSWPTC.

*P. L. Mackenzie,*
*Wallsend, 2287.*

Sir,

Firstly, I must join with so many of the other letter writers to AMRM and congratulate you on such a good magazine. I really appreciate the advertisements and reviews as well as all the other editorial comment.

I am currently in the planning stages of a new layout and I am trying to decide on what brand of points to use. On my present layout I've used the Peco HO insulated frog points. Now, with all the new additions to the Peco range plus other brands I'm a little confused. Therefore, I would appreciate an article on this matter outlining the various good points.

There are a few projects on which I'm working at present. I hope I may be able to give something back to AMRM by writing about them soon.

Agains thanks for all your work.

*Robert Bremner,*
*Annerley, Qld 4103*

Sir,

I am writing in reply to a 'hope' letter written by F. G. Farmer in the Nov/Dec 1978 issue of AMRM. It is true, that locos were painted in other colours than black, and the only (to me) known list is in a book called Steam Locomotive Data, published by the NSWPTC in 1974, and is available at the NSWRTM or ARHS. The book doesn't look as it sounds, it doesn't have scale drawings or photos but only technical data

Continued on page 54

**Road Vehicles; various scales. Our samples supplied by Romco Distributors. Available from most hobby shops and large retail outlets.**

The vehicles presented for review are of French manufacture under the name "Majorette".

Four items were submitted but the range is extensive and covers commercial, industrial, service and private vehicles. Scales are 1:100, 1:87, 1:80, 1:70, 1:65 and 1:60, depending of course on the type of vehicle modelled. I would like to see some form of brochure produced on the full range and scales of the vehicles.

The four vehicles — a 6 wheeled petrol tanker "Saviem" in 1:100 scale, a 6 wheeled tip truck "Maguirus" in 1:100 scale and a twin pack of Volvo station wagon and horse float in 1:60 scale — are each presented in a plastic bubble pack. The models are of die-cast metal and plastic construction with good detail shown — door handles, lights, grille, mauber plates, seats, left hand drive, windows, opening boot lid, etc. The horse float canopy is removable and includes a horse about ? hands high. The paint finish (on the vehicles — not the horse) is of a gloss enamel. The wheels are wide and free running.

The range of vehicles is of modern design, and the price at $1.15 per single vehicle and $2.30 per twin pack privides value and usefulness on layouts appropriate to their relative size.

*Max Burke*

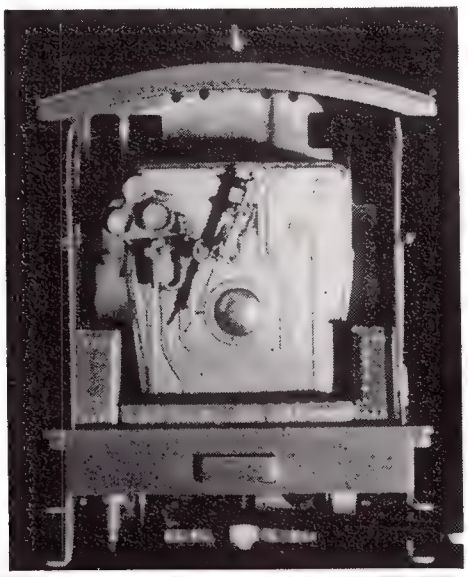
**NSWGR 'C30T' 4-6-0 locomotive and tender, imported by Berg's Hobbies, 223 Church Street, Parramatta.**

The C30T class locomotive was a rather common locomotive and toward the end of steam could be seen on many branch lines and goods yards carrying out the menial tasks alloted to them. An illustration of how often they could be sighted (during the demise of steam) is in Ron Preston's latest book NSWGR IN STEAM where mention is made of the disappointment of railfans when a C30T came on the scene. 'It's only a thirty Tee' was the usual cry.

For the modeller the C30T is an ideal loco for it is a small unit that would be at home on a small or large layout. The class came into existence due to the modernisation of the Sydney suburban network in the period between 1928 and 1933 when electrification took over. The surplus tank locomotives (C30 class) were converted to tender locomotives with the removal of the side tanks and the coal bunker. They were allotted tenders from surplus units off other classes including C32, Z16, D50 and the scrapped Baldwin locomotives. In all 77 of the 145 strong C30 class were converted and the suffix 'T' was added to signify a 'tender' unit which no doubt is confusing, for the same suffix is given to a tank locomotive in most systems of locomotive coding.

Like most locomotives the units in the class underwent many mechanical changes that altered the visual appearance, some having extended smokeboxes, some (working in the west) having the valve gear covered and differing piping and safety valves.

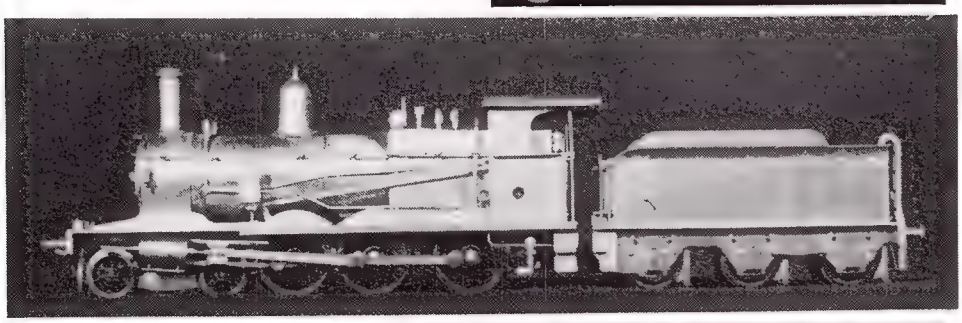
The model, in HO scale, is handcrafted in brass and imported from Japan. As supplied the model represents 3088, having a short smokebox (saturated unit), pop safety valves and a 6-wheel C32 class tender. Comparing the unit to the DATA SHEET plan shows that it is a very accurate model, the tender being a shade over width and the dome being 2mm too high. The stack is accurate but does not look right for the taper has not been over accentuated as other brands have seen fit to. General detail is superb, the lost wax castings being finely detailed. The impressive aspect is the detailed back plate on the boiler, where a cluster of valves and a regulator are in position. To fit the backplate the fire box had to be extended into the cab, for in reality it hides the motor. Unfortunately it does spoil the look of the silhouette of the loco for the firebox is over two scale feet over length. For the technical minded the regulator is incorrect for it is a C38 style and not that fitted to the C30T. Headlight and front marker lights are not fitted although it is expected that they should be available as an extra, to be added to the model by the purchaser.



Mechanically the unit runs freely and smoothly. It is powered by a small five pole motor that drives onto the front axle through a reduction gearbox. The boiler is weighted. On the layout the unit proved to run well at a slow speed and handled the 30 to 40 mph limit, in both directions well. On a 40:1 grade it would only haul equivalent to 11 four wheelers, and was slipping very easily. This latter aspect is not really bad for the class was only capable of hauling small loads and the inability of the model to haul large loads ensures that it will be used in a correct manner.

Bearing in mind that the unit reviewed was the pilot model there is little doubt that the C30T is the most accurate, well detailed, well assembled steam locomotive to come from the Berg's stable. With more models like this the pedantic will have to look elsewhere to nit pick.

*Bob Gallagher*



**The ABC's of MODEL RAILROADING, published by Kalmbach Books. Available from Australian Model Craft outlets. Price: $4.50.**

'The ideal book for beginners!' . . .' from the pages of Model Railroader' . . . '23 chapters to help you get started in model railroading' . . . are the by-lines on the front cover of this 72 page booklet. The subject matter is rather obvious for this is a book that can be judged by its cover, and it does get down to the basics in the model railway hobby and within the covers are details that will guide the new modeller to a good start in the hobby which will be a saving in money usually lost when mistakes are made.

Subjects covered in the book include scales/gauges, track planning, tools, benchwork, trackwork, wiring, scenery, tips on modelling (scratch building), structure building, model painting, signalling, operation, couplers, locomotive and track maintenance, power packs and controls. The subject range covers the basics in the hobby but although most subjects are well covered, there will still be a need for further reading, (probably another Kalmbach book) to give the modeller a greater knowledge on some subjects.

The leading chapter supplies definitions and explanations that would help all modellers. The book does give some hard line suggestions that would be a definite help to a new modeller, saving the expensive period of indecision. This is especially amplified during the discussion on couplers, where the use of Kadees is heavily recommended. The book has a few drawbacks in that the terminology is American (which does differ in some instances with that used in Australia) and the subject matter only covers American made equipment, where here in Australia we have scope of American, European and British equipment to choose from.

In all it is an excellent book for all modellers, especially the beginner, and should be considered essential reading by the latter before he/she has advanced too far into the hobby.

*Bob Gallagher.*

**Destination South Brisbane, published by the Australian Railway Historical Society, Queensland Division, PO Box 682, GPO Brisbane 4001. Price: $6.00 (incl. post).**

This 120 page book was produced to mark the opening of the rail link accross the Brisbane River, linking the Roma Street and South Brisbane terminals, no doubt depleting the importance of South Brisbane as a major terminal on the QR.

The numerous chapters, which are illustrated with both colour and black and white photographs, cover the numerous lines that radiated from South Brisbane. The text is written in a 'light' style that makes historical details interesting and easy to read. The phased out steam power is emphasised in the photographic coverage, and while most are naturally of the QGR locomotives some NSWGR units, servicing the interstate link are featured. For the modeller, there is untold information in the photographs that are well printed, and as such very clear and sharp. The book is well printed and clear of too many dark photographs that seem to marr many historical (railway) books these days. A good reference book on Queensland railway practice during a bygone era.

*Bob Gallagher*

## MAILBAG

Continued from page 52

on each separate loco and general data. After every locomotive listing there is a small section with the numbers underlined and the explanation, whether or not it was painted different or had smoke deflectors etc.

At the back of the book it also lists loco colours and names for some locos (some 32s, 35s and 36s) and a list of locos painted green by 1943. The book has its drawbacks, like it doesn't mention the one or so 30s that were different, not the 55s of 53s but it has the percentage so it is good generally. It numbers the locos and their colours and also mentions what ever happened to each loco, whether preserved or scrapped. It is only useful to the NSW modeller and is worth every penny because of all the info' that it contains.

Concluding, your magazine is a help to the Australian modeller and wish you success in the future.

*D. Eichman*
*Greenacre, NSW.*

Sir,

Having just finished reading your latest magazine I am continually amazed at what a fantastic magazine a bunch of obviously enthusiastic volunteers can do. Having read most of the letters in Mailbag I agree that the brass locos are far too expensive for what you get. I have only ever bought the plastic models and since I model SAR and VR prototype, I convert them as necessary and now have a reasonable stable of locos including 700, 600, 930, 500 (SAR), T, X, C (VR) and a CL (ANR).

All of these required some work but prove an inexpensive alternative to brass locos.

*R. H. Sanders*
*Lower Mitcham, SA.*

Sir,

**re Coloured Engines of the NSWR**

The following is a list of locomotives which, at various times, were painted in colours other than black.

On the occasion of the visit of the Duke and Duchess of York in connection with the opening of Federal Parliament House, Canberra in 1927, the undermentioned engines were temporarily painted in Royal Blue:—
3316, 3329, 3332, 3339, 3360, 3602, 3615, 3616 and 3617.

In 1934 the Duke of Gloucester visited this country and locos
3266, 3310, 3339, 3343, 3374 and 3380
were painted green, lined out in red and yellow. No. 3526 was painted Royal Blue.

Some years later, when it became general policy to have gayer locos, a comprehensive scheme of painting was evolved as under:—

**GREEN ENGINES**

**12 class** 1210, 1214, 1243 and 1245
**13 class** 1301 (not changed from black until many years later)
**17 class** 1709 (finally red)
**32 class** 3221, 3229, 3237, 3240, 3251, 3266, 3277, 3283, 3289, 3290, 3295, 3306, 3310, 3339, 3343, 3352, 3374, 3380. Note: 3266, 3310, 3339 3343, 3374, 3380 had already been painted green for the visit of the Duke of Gloucester in 1934.
**35 class** 3503, 3505, 3514, 3516, 3517, 3519, 3521, 3527, 3528, 3529 and 3530
**36 class** 3603, 3608, 3609, 3611, 3613, 3616, 3619, 3621, 3628, 3629, 3633, 3635, 3637, 3638, 3640, 3642, 3643, 3644, 3649, 3652, 3653, 3660, 3661, 3666, 3667, 3669, 3671, 3672, 3673 and 3674.

**RED ENGINES**

**32 class** 3265 and 3298 for working the Newcastle and Intercity Expresses.

**BLUE ENGINES**

**35 class** 3506, 3526 and 3535 for working the Caves Express which ran between Sydney and Mt Victoria with car sets 75 and 86 painted blue and russet to match.

*Len Clark*
*Thornleigh*

Sir,

I would refer to the letter from F. G. Farmer in the "Mailbag" of November/December. I would suggest that a copy of "Steam Locomotive Data" be purchased from the PTC as on page 1131, July 1, 1974 Edition, are details of Locomotives Painted and also named of the NSWGR. However, I feel the list given with regard to locomotives painted Green by 1943 is incorrect as refers to 3801 to 3812 inclusive. In 1943 only 3801-3803 inclusive had been built and until after the end of the 1939-1945 were battleship grey.

*N. Cram*
*Penrith, NSW.*

## AMRM NEWS

Continued from page 47

**Brickbats!**

Recently at an exhibition an aquaintance raised a few points about aspects within AMRM that displeased him. The following discussion (for want of a better descriptive word) did bring to our notice a problem that we were not fully aware of. Now that the problem has been put in the open we can strive to avoid it in the future. Following this there is probably a number of readers who have a dislike for other aspects of AMRM and we are now inviting them to write in stating their gripe and where possible detailing why the particular aspect is so unliked.

**Brass Locomotive Debate**

Despite the initial verbal comment on both Allan Brown's Comment and Ian Thorpe's letter in the September/October 1978 issue very little written debate has come from readers nor the importers of the models under comment. This has been dissappointing for there is much to be learnt as to why models from overseas are so expensive. Recently in the United States a modeller made a similar comment and was answered, in detail by the propritor of a major importing organisation. The letter may not have quelled to comments but it did give the full reasons for the high price. There is still time for one of our importers to give us some insight into the problem which is going to have a very big influence on the future purchasing power of modellers.

**Are Brass Models Essential?**

With the debate on brass locomotives and the constant gripe about the price which seems at times to be a cry as to "Why can't I afford them", there is a possibility that modellers have overlooked a major aspect of the model railway hobby . . . scratchbuilding. Yes a dirty word to some for they lack the initiative to attempt a model and give up in desperation when their first model is not a prizewinning unit. Ten years ago modellers of NSWGR prototype had to build his models, locos and all, if he wanted to participate in the local aspect of the hobby. The arrival of brass and plastic models has widened the interest and availability of models, but to fully cover the field there is a need to build a few models. This is not to suggest the cessation of brass locos from Japan, but a change of values. This hobby will be much better off when a layout is graded according to its overall effect rather than the number of brass locos running on it. Brass is nice but NOT essential.

**Brass Locos . . . a definition?**

To add fuel to the brass loco debate a comment in Kalmbach Publications latest book 'The ABC's of Model Railroading' (a great book for beginners) needs repeating. In answer to the question "What's the difference between plastic and brass equipment?" the answer was . . . "Most brass equipment is handcrafted in the Far East and is much more expensive than plastic equipment, which is mass produced. You're paying for the rarity and craftmanship associated with the imported brass; plastic items often have just as fine detail (although it is moulded in) and mechanically they operate just as well if not better than the brass."

We are not alone . . .

**Another Missing Loco?**

It does appear that someone in Queensland has a liking to 3' 6" gauge locomotives, for a HOn3½ 1200 class QR diesel disappeared off the Qld branch of AMRA layout at the 1977 Brisbane Hobby Exhibition and this year a Sn3½ Mt Isa Mines diesel-hydraulic went missing. Maybe they were taken by mistake, and the owners would dearly like the return of the models that took so long to build. Please contact the AMRA secretary at 32 Wana St, Sunnybank, Qld 4109, with any details that will speed up the return of the models.

**Railsheet**

Recently in AMRM NEWS, mention was made of this VR rolling stock news sheet but regretfully we must advise of its demise, primarily due to the workload of its driving force, Peter Vincent. Fortunately Peter will continue to assist in the ARHS NEWSRAIL and AMRM so his prototype knowledge will not be lost to the hobby. Peter has specialised in detail and variation of VR rolling stock and has made available to the public his notes via the various publications he has worked upon. While he is not alone in his field of research Peter differs from most for he shares his knowledge, something many so called specialists in the railway research field seem to avoid. One must wonder why, when so many of us want to learn about the details someone has locked up in his own house or mind. So many clouded issues could be cleared up with just a little co-operation. Thanks Peter, your efforts are appreciated.

**Conference**

For some unknown reason Model Railway Conferences are not really popular in Australia despite the many appealing aspects involved. It is possible that the monetary involvement frightens off most parties, for most conferences do involve extensive travel for in most instances they have been held in either Sydney or Melbourne.

AMRM in association with the Canberra Model Railway Club is organising a Mini-Conference, that will be held on the Saturday evening of the Canberra Model Railway Exhibition. The conference follows the rather successful modellers night held in 1978 in conjunction with the Canberra Exhibition.

The night will take the form of a barbeque followed by a number of small clinics that will cater for most modellers of all tastes. Some of the clinics will be specifically aimed at the beginner in the hobby and there is little doubt that most of us will benefit from some of the clinics envisaged. Costs are being kept to a minimum and these can be further reduced by some accurate planning (for numbers) and interested parties are requested to write to the Exhibition Manager for further details (when available).

The exhibition is programmed to be held on the first weekend in August, in the Woden Valley area of Canberra. For clubs the combined exhibition/Mini-Conference is an ideal opportunity for a group outing, for motel costs are not too expensive when shared and to be truthful the Canberra boys know how to organise a friendly function making up from the lack of warmth that emulates from our politicians.

For further details write to, Exhibition Chairman, CMRC 4 Tompson St, Garan, ACT 2605.

**Commercial News**

While very little has been happening upon the commercial side of the hobby locally, much has in fact been going on behind the scenes. Book-wise the ARHS as a publisher and distributor has been busy with 'Generation One' and 'NSWGR in Steam', the latter a book by Ron Preston is a pictorial coverage of the NSWGR during the last 20 years of steam. Although the subject has been covered before, this book seems to be head and shoulders above the rest. Ron Preston is a known lover of trains and his ability to compose a photograph that is useful to the modeller is uncanny. By studying the photos and observing the small detail modellers can learn a lot. The book is at present difficult to get but try not to miss it. 'Generation One' is a coverage of the diesel era upon the NSWR. Hopefully both books will be reviewed in full in the future.

Most interested modellers are no doubt aware of Berg's Hobbies NSWGR C30T, and it is pleasing to report that the model actually looks like the class of locomotives it represents. This cannot be honestly said for all the models that have entered Australia, and the organisers are to be congratulated upon their efforts. The C30 to follow should, on all accounts, be much better than the first series and hopefully those to follow will continue to show the improved standard.

The new year is now with us and hopefully for the society, it will be a memorable one.

The Christmas night in 1978 also served as a reunion where past members were in attendance to join the festivities. The special guest was Leigh Tingal, whose foresight and determination saw the commencement of the society in 1936. Jack Page, the foundation president was in attendance and related some of the past history of one of Australia's oldest model railway societies. The committee of the society is anxiuos to contact all past members and requests those who were not contacted recently to write to the secretary and advise their current address. The secretary's address is 79 Canbridge St, Penshurst NSW.

The HO layout is back in operation after alterations and the increased facilities allows us to cater for the newcomer. New members are welcome and are requested to contact the secretary for further details.

## 1979 STUDENT PHOTO COMPETITION

The NSW School Railway Clubs Association is holding a photographic competition that is open to any NSW school student. Cash prizes are to be awarded for the competition which closes on 31/3/79. For details of the competition write to the secretary at Box E24 Post Office, St James, NSW 2000.

## TT MODELLERS

Modellers working in the British TT scale are advised that an Australian group of the Three MilliMetre (3mm) society has been formed. Membership also covers membership in the British head body. For further details of the group, which anticipates manufacture of Australian 3mm models, contact the organiser, E. Mullett, 27 Greens Pde, Valley Heights, NSW 2777.

Following the CUB set, at presently available in some hobby shops, MRC Models will soon be releasing independent cars of the series to allow modellers the choice of set.

Despite rumours to the contrary there is little evidence of the pending arrival of the Lima 8300 brake van or the Indian Pacific power van.

The boys at FSM have been busy in recent months, for redesigned Z25 class kit has been finished and the Z24 class is nearing completion. Basically the Z25 class is a completely different kit, for the motor is now mounted in the loco and the tender has a chasis and has been squared-up. It runs superbly and will pull twice the correct load. Shortly FSM will commence work on the D53 class and Wampu tender and it is interesting to note that they intend to sell tenders seperately to allow modellers the choice of loco and tender, so just like the NSWGR modellers can have the combination of their choice.

News from the UK indicates that Romford have released a 16mm driving wheel and are now supplying a non insulated wheel with a nickle silver tyre. The old metal wheel of Romford's while being servicable needed constant cleaning and the nickle silver tyred unit is a welcome addition to their range. We understand that FSM, as stocks and production allows will supply their kits with the nickle silver tyred un-insulated wheels.

**A Need for Models**

There is little need to point out the NSWGR prototype has a larger following than any other Australian prototype and it seems some modellers modelling prototypes other than NSWGR are a little bitter that their interest is not covered commercially. Very few realise that NSWGR prototype went through the same wilderness until Model Dockyard produced the C38 which was the commencement of interest by commercial organisations in HO scale Australian Models. Some modellers have expressed dissappointment to manufacturers and some have claimed that because only NSWGR outline is produced they, the modellers, are being forced to model NSWGR instead of their local scene.

There is little doubt that manufacturers must aim their products at a known market (as NSWGR prototype has been proved) and many are reluctant to gamble on the unknown. Modellers of QR, VR and SAR will have to stand up and be counted in many ways before any organisation will risk a commercial venture in their field. Current modellers can encourage others to join their ranks, by writing articles on models and construction, just as the NSWGR modellers did before their side of the hobby saw commercial development, so basically the boot is on the foot of the wearer. If modellers can walk in it there is a chance that it may wear. The popularisation of QR, VR and SAR is at the moment in the hands of a few capable modellers, but they need support in their task. Why not try a little constructive work instead of destructive, demoralising chatter.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## MIXED GAUGE

The stainless steel air conditioned SSA class special service car built in 1969 for VIP trips over standard gauge tracks in Australia was a resident of the Australian National Railways' Islington Workshops, Adelaide during May 1978. Trials were held over the broad gauge network in the Adelaide area following SSA 260's release from 'shops. This vehicle appears to have been modified for bogie exchange operations, and joins a select band of Australian passenger cars which have been treated in a manner to enable their use over either broad or standard gauge routes.

*Peter Borough*

## CLUBS

The Berrima District Model Railway Club has been recently formed in the Southern Highlands of NSW. The secretary is Dennis May, 12 Thompson St, Bowral Ph (048) 61 2317 after 3 pm. New members welcome.

## DOESN'T IT LOOK REAL?

Sometimes we can't put our finger on it. Yet we know that a model scene has a degree of realism that is well out of the ordinary. A photo in a magazine sometimes strikes us that way. There is something about the arrangement that seems so real as to be beyond the ability of ordinary imagination.

Perhaps that gives us our first clue. I know myself I am a very poor 'imagineer' of a scene, but things seem to have that touch of extra realism when I copy a photo of a prototype place. The hardest thing, though, is to portray the open spaces. And I strongly suspect that that is the major clue.

Imagine a train in a cutting that curves its way gently through the edge of a hillside. Better than twisting round the series of molehills we generally place in the way of our track.

A wood yard perhaps in the station precincts with plenty of room for the trucks to turn around and separated from a spacious road and dirt footpath by, say, a straggly line of unpruned olive trees.

But it is not just space. Also playing their part are the permanently open gate, leaning on one hinge, the potholes and wheel depressions in the driveway, and perhaps, if it is a scene in the twenties or thirties, the single car parked proudly in the centre of the station forecourt instead of our usual display of every model vehicle that has been available on the commercial market. Passing traffic through the woodyard gate over the years would have permanently submerged its bottom rung in a mound of dirt.

There is still much we can learn. We should give those striking photos of extraordinary realistic modelling very close examination.

*Ross Hurley*

## ANOTHER USEFUL HINT

Modellers of the late nineteenth and early twentieth centuries may have occasion to incorporate a stagecoach run on their layout. The Preiser No. 499 Set comprises 6 horses and coach, the vehicle being a good representation of the Concord type employed extensively by Australian operators, notably Cobb & Co.

*Paul Rogers*

## TRADE PRACTICES ACT 1974

The above act is now in force and contains strict regulations on advertising.

It is not possible for this company to ensure that advertisements which are published in this magazine comply with the Act and the responsibility must therefore be on the person, company or advertising agency submitting the advertisement for publication.

In case of doubt, consult your lawyers.

**SCR Publications.**

## SOUTHERN CROSS MODEL RAILWAY ASSOCIATION

**Secretary:** Trevor Moore.
**Membership Enquiries:**
P.O. Box 84,
Miller. N.S.W. 2168.

### DIVISIONAL REPRESENTATIVES:

**Queensland:**
Peter Kelly,
8 Moorhouse St.,
Bald Hills, 4036.
Ph: (07) 2611512

**New South Wales:**
George Giraldi,
322 Elizabeth Dr.,
Mt. Pritchard, 2170.
Ph: (02) 602 3117

**Victoria:**
Herb Drury,
39 Allanfield Cres.,
Boronia, 3155.
Ph: (03) 321 2649

The Annual Membership fee for the SCMRA is $8 from March to February and $6 Joining Fee.

Membership entitles you to participate in the activities of the Association, to receive AMRM, and our newsheet Booster. Standards, Recommended Practices and Information Sheets covering model railway practice are included in the joining kit together with a vinyl ring binder and are also issued at regular intervals.

For further details write to the secretary or contact the divisional representative.

Meetings are usually organised on the second Saturday on each month in New South Wales, Victoria and Queensland. For further details and location please contact the divisional representative.

New South Wales:

**February 10: Meeting with discussion on scratch building at Epping.**
**March 10: Meeting with discussion on scratch building with brass at Mt Pritchard.**
**April 7: Meeting with discussion on timetable operation at Cromer.**

## N.S.W. WAGON COUNTDOWN — 8

In 1955, the N.S.W.G.R. had 30 'MH' type four wheeled metal hopper wagons available for service. This class is now extinct.

*Paul Rogers*

## INQUIRY CORNER

Paul Rogers, of 18 Joyner Place, Flynn is seeking the road numbers of those NSWPTC single deck suburban electric cars which have had new side windows fitted. All replies will be acknowledged.

**The advertising deadline for the March/April 1979 issue of AMRM is the 16.2.79. Please be early.**

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## canberra model railway club

We of the Canberra Model Railway Club thought you'd like to know how things are going with this year's Canberra Model Railway Exhibition. For starters, it's to be held on the first weekend in August, so keep that one free. Secondly, we will be at a new venue - Phillip College, Phillip. This offers more exhibition space yet still retains the cosy atmosphere of the last venue and is also within easy walking distance of the Woden Bus Interchange. Interstate visitors won't need to spend their time driving in circles to find us!

Our Competition will be held again and looks to be bigger and better than last year's successful effort. Entry is free so start thinking about what you're going to enter. There will be extra sections for the best Australian, US and British models this year as well as handicap sections so there's no need to be bashful. Now is the time to start working, especially if you're thinking of a diorama. Further details from our contact address given below.

Last year's barbecue and local layout visit was so successful that this year we hope to hold a Mini-Convention on the Saturday night. To be run in conjunction with the AMRM, this will take the form of a number of clinics, presentations and films following the evening barbecue. We anticipate holding local layout visits over until the Sunday morning to allow more time to view each layout than was available last year. If you're interested in either attending or presenting a session at the Mini-Convention then contact us giving your name and address and relevant details. Local billeting will be considered for out of town visitors.

If you have a layout or display that you'd like to exhibit, contact us. We are always looking for high quality presentations as it is our intention to make the Canberra Model Railway Exhibition the best in Australia and we pay a generous honorarium to ensure that we attract the best.

Lastly, if you are interested in receiving further details on the Exhibition, the Mini-Convention or the Competition, send us you name and address and we will add it to our mailing list.

Ian Macfarlane
PRESIDENT, CMRC.

ALL mail to :
EXHIBITION MANAGER
CANBERRA MODEL RAILWAY CLUB
4 TOMPSON ST
GARAN ACT 2605


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**P.O. Box 155, BEAUDESERT**
**QUEENSLAND. 4285.**
**Ph. 075 41 1014 A/H**

A4

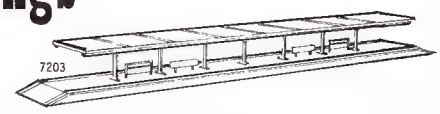
## SUPERQUICK MODEL KITS

## HO/OO KITS

A-1 Station Platform (side).. 2.25
A-2 Side Platform Building .. 2.25
A-3 Island Platform .. .. .. 2.25
A-4 Island Platform Building 2.25
A-5 Two Track Engine Shed .. 3.50
A-6 Signal Box & Platelayers Hut .. .. 2.25
A-7 Goods Shed .. .. .. .. .. 2.25
A-8 Water Tower & Weighbridge Shed . .. 2.25
A-9 Block of Flats . .. .. .. 2.25
A10 Large Terminal Building with platforms etc. .. 4.50

B-21 Swan Inn .. .. .. .. .. 2.25
B-22 Two Country Shops .. .. 2.25
B-23 Barclay's Bank .. .. .. 2.25
B-24 Farmhouse . .. .. .. .. 2.25
B-26 Hayloft & Barn .. .. .. 2.25
B-27 Supermarket .. .. .. .. 2.25
B-28 Elizabethan Cottages .. 2.25
B-29 Church with Steeple .. 2.25
C-1 Low Relief Hotel etc... 2.25
C-2 Low Relief Cinema etc. 2.25
C-3 Low Relief Flats/shops 2.25
C-4 Low Relief Period Shops & Offices . .. .. .. 2.25

# S.N. mouldings Plastic Kits in *N*



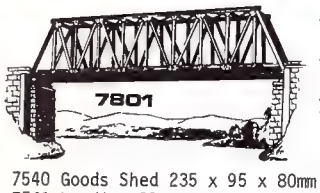

7202 Platform Kit 380mm long 1.25
7203 Island Platform Kit, canopy nameboards etc. .. .. .. 2.50
7204 Single Tunnel Mouths with wing walls (pair) .. .. 1.25
7205 Double Tunnel Mouths with wing walls (pair) .. .. 1.25
7206 Plate Girder Bridge 80mm single track, grey .. .. 1.25
7207 Two Lineside Huts .. .. 1.25
7208 21 Telephone Poles .. .. 1.25
7209 Signal Kit for 2 signals 1.25
7210 Suppoert Walls for 7206 1.00
7211 Large Station, canopy, skylights etc. 662mm 3.50
7213 Stone Wall 5-105x22mm 1.25
7215 2-storey House 1.25
7216 Station with booking office etc. 510mm long 3.25
7217 Station Building and canopy 2.00
7218 Post & 3-rail fence 1150mm 1.25
7219 Signal Box 1.75
7220 Loading Gauges (two) 1.00
7221 Thamehead Bus Kit (Metal 2.00
7221 Goods Shed - runthrough type .. .. 2.75

# RATIO PLASTIC MODELS HO/OO

SIGNAL KITS

LQ/60 G.W.R. Lower Quadrant old type with taper square post, ground signals, route indicator box $3.25
LQ/61 G.W.R. Lower Quadrant,tubular post, makes 2 signals..... $1.25
UQ/70 L.M.S. Upper Quadrant tubular post - makes 4 signals plus ground signals ..... $3.25
LQ/71 L.N.W.R.Lower Quadrant, square post, makes 4 signals ..... $3.25
UQ/80 L.N.E.R. Upper Quadrant (ex GNR) lattice post,finials,lamps, ladders,brackets arms,platforms, wire etc. makes 4 signals .... $3.25
PT/50 Pratt Truss Signal Gantry. Kit contains girder mouldings, plat. brackets, smoke deflectors etc. Designed for use with UQ/70 but adapts to other types ..... $1.95

# VOLLMER N GAUGE PLASTIC KITS

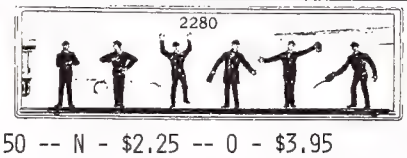



7504 Passenger Platform w/canopy 650 x 35 x 40mm ..... $8.95
7505 "Baden Baden" Station 780 x 160 x 200mm ..... $27.50
7506 "Aldstadt" Station, similar style to "Baden Baden" but smaller 330x115x135mm .. $13.50

7540 Goods Shed 235 x 95 x 80mm ..... $11.75
7541 Loading Platform with awning 520 x 35 x 48mm ..... $6.75
7800 Steel Girder Truss Bridge 150 x 40 x 30mm ..... $4.95
7801 Box truss Bridge 225mm long ..... $5.95
7900 Factory 190 x 90 x 75mm ..... $7.50
7901 Overhead Gantry Crane 120 x 65 x 75mm ..... $5.75
7905 Container Crane 165 x 63 x 80mm ..... $5.75

**EXCELLENCE IN PLASTIC KITS**

# MERTEN FIGURES & ANIMALS




HO/OO - $2.50 -- N - $2.25 -- O - $3.95

800 6 Railway & Refreshment room staff
806 6 ladies walking with bags
*810 3 men & 3 ladies walking with bags
818 Two groups of 3 tourists
*855 3 men & 3 ladies seated
867 3 groups of 2 seated
870 6 workmen with picks, shovels etc.
*908 Platform Staff: 5 men 1 woman

2174 Beach Party w/musical instruments
2234 6 Transport workers with crates
2240 6 different trans. workers
2258 6 tradespeople,butcher etc.
*2280 Train Crew of 6,shunters, greasers etc.
2286 Men,women,children climbing stairs
2292 3 groups of 2 climbing stairs

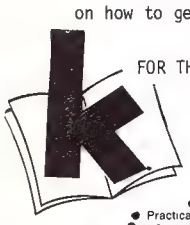
*Above numbers are HO/OO and are preceded by 'N' for N gauge*
*Numbers marked * are also available for O gauge.*

## NEW BOOKS FOR THE NEW AND NOT SO NEW MODEL RAILROADER

NEW EDITION:

12013 "SMALL RAILROADS YOU CAN BUILD" - Step by step instructions for the building of four small railroads covering all aspects of building a small layout. -- -- -- -- -- -- -- -- -- -- $4.25

12036 "THE abc's OF MODEL RAILROADING" - Answers all your questions on how to get started in the hobby of model railways. -- -- -- -- -- -- -- -- -- -- $4.50



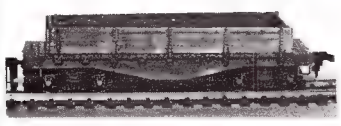
FOR THE MORE ADVANCED MODELLER -

- N Scale Model Railroad Track Plans
- Track Planning for Realistic Operation
- How to Wire Your Model Railroad
- Track Plans for Sectional Track
- Scenery for Model Railroads
- Railroads You Can Model
- Practical Guide to Model Railroading
- Bridges & Buildings for Model Railroads
- Easy-to-Build Model Railroad Structures
- Practical Electronic Projects for Model Railroaders
- N Scale Primer
- Small Railroads You Can Build
- 764 Helpful Hints for Model Railroaders
- All About Signals
- HO Primer
- Traction Guidebook for Model Railroaders
- 101 Track Plans for Model Railroaders
- Railroad Station Planbook
- HO Railroad That Grows
- Easy-to-Build Model Railroad Freight Cars

12034 "MORE RAILROADS YOU CAN MODEL" Prototype railroad to model layout - nine railroads & modelling suggestions ---- $5.25

**KALMBACH BOOKS**

## ROUNDHOUSE Products



425 Kit for O-6-0 Tank Loco Union Pacific ..... 25.00
431 Kit for 4-4-2 Atlantic Santa Fe ..... 55.00
2795 Climax with ready-to-run chassis etc. .... 37.50
SHORTY ORE CARS, RECTANGULAR SIDES ..... 3.75
1421 Duluth,Missabee & Iron Range
1428 Santa Fe 1429 Union Pacific
SHORTY FLAT CARS, 30ft ..... 3.75
1450 Unlettered 1455 Sthn Pacific
3-BAY HOPPERS (6-BIN) ..... 3.75
1485 Unlettered 1498 Virginian
1490 Norfolk & Western
THREE-IN-KITS ..... 9.50
1502 Flat Cars (MW)
1507 Tank Cars (MW Fire Fighting)
1509 Skeleton Log Cars & Assay Office

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GRASS MATS 30" x 40" for fields, lawns, hills etc. EACH $5.25
7220 Dark Green; 7221 Mid Green;
7222 Green with flowers;
7223 Mid green with bare spots;
7224 Green with brown flecks;
7226 Mid Green with flowers.

BALLAST & GRAVEL MATS 30" x 40"
7247 Imitation Grey Ballast 3.95
7250 Imitation Gravel .. .. 4.50

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7051 Grass Flock - green .75
7052 Grass Flock - yellow/gr. .75
7053 Grass Flock - lt. green .75
7054 Grass Flock - yellow .75
7056 Grass Flock - brown .75

7101 Junior Scenic Pack.... 3.25
7102 Lichen - green ..... 1.10
7103 Lichen - yellow/brown. 1.10
7110 Standard Green Flock.. 1.35
7111 Spring Green Flock.... 1.35
7114 Dark Green Flock..... 1.35
7150 Green Hedge - 10mm x 1m 2.25
7151 Green Hedge - 18mm x 1m 3.25
7152 Coloured Hedging..... 2.75
7162 Granulated Foam-Spring Green 1.20
7164 " " Mid Green 1.20
7166 " " Dk Green 1.20
7190 Large Scenic Pack..... 7.00

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# Aspect Models

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**Australia**

## CATALOGUES

Merker & Fischer H0 gauge parts catalogues and N gauge loco kits catalogues are expected late in January. The H0 gauge loco kits catalogue is out of print, further stocks are expected about March next year.

## RAILCRAFT

*Flex-trak, yard lengths with plastic sleepers, and very fine rail fastenings. Sleepers are slightly irregular for more realistic appearance:*

| | |
|---|---|
| H0 code 55, six lengths | $16.70 |
| H0n3 code 55, six lengths | 16.70 |
| H0n2½ code 55, six lengths | 16.70 |
| H0n3 code 40, six lengths | 17.60 |
| *Weathered nickel-silver rail, bundels of 33 x 3 ft lengths:* | |
| Code 40 | 21.00 |
| Code 55 | 23.00 |
| Code 70 | 26.20 |
| Code 100 | 23.50 |
| H0n3 sleepers, per 1000 | 4.30 |
| H0n3 sleepers, points, (500) | 4.30 |
| H0 sleepers, per 1000 | 4.95 |
| H0 sleepers, points, (500) | 4.95 |
| N gauge sleepers, per 1000 | 3.50 |
| N gauge sleepers, points, (500) | 3.50 |
| Rail joiners, code 40 (50) | 2.00 |
| Rail joiners, code 55 (50) | 2.20 |
| Rail joiners, code 70 (50) | 1.98 |
| Rail joiners, code 100 (48) | 1.85 |
| H0n3 track gauge, code 40 | 2.05 |
| H0n3 track gauge, code 55/70 | 2.05 |
| H0 track gauge, code 70 | 2.05 |
| H0 track gauge, code 100 | 2.05 |
| Pliobond glue, per tube | 1.80 |
| Crimping tool (for rail-joiners) | 4.95 |

*A leaflet on hand-laid track construction is available on request. Railcraft rail is chemically treated to give an electrically conductive natural weathered appearance.*

## MAGAZINES AND BOOKS

Narrow Gauge and Shortline Gazette (American) $2.25 each; annual subscription $15.95
1977 backnumbers $1.50 each
M & F Journal (German) $2.60 each; annual subscription $17.95; 1977 backnumbers $2.60 each.

## GERMAN LOCOMOTIVE POCKET-BOOKS

| | |
|---|---|
| Diesel locos (214 pages) | $5.95 |
| Steam locos (270 pages) | 5.95 |
| Electric locos (222 pages) | 5.95 |
| Railcars (222 pages) | 5.95 |
| Narrow-gauge steam (222 pages) | 5.95 |
| Rolling stock, signals | 5.95 |
| Trackwork, stations | 5.95 |
| German Locomotive Builders (New) | 5.95 |

## LILIPUT H0 locomotives

| | |
|---|---|
| 2-10-2 tender loco (BR 45) black or grey | $196.00 |
| 4-6-4 tender loco (BR 05) black or grey | 196.00 |
| 4-6-4 (BR 05) streamlined, red | 135.00 |
| Swiss 4-6-0 loco (3 rail, AC suit Maerklin) | 79.00 |

## MERKER & FISCHER Superb quality German H0 scale kits

| | |
|---|---|
| Kittel steam railcar | 89.00 |
| Wismar H0 petrol railcar | 75.00 |
| Prussian T3 0-6-0T (Allen valve gear) | 77.00 |
| 2-12-0 tender loco (BR 59) | 395.00 |
| 0-8-8-0 Bavarian Mallet (BR 96) | 395.00 |
| 4-6-0 Prussian S10 (BR 17) | 325.00 |
| ET 194 electric freight railcar | 59.00 |
| H0n2½ 0-6-0T (BR 99-450) | 118.00 |

## BEMO German H0n2½ (9mm gauge)

| | |
|---|---|
| V51 Bo Bo diesel loco | 69.95 |
| Six-wheel open wagon | 7.70 |
| Six-wheel van | 8.30 |
| Buffer van | 11.40 |
| Transporter bogies (pair) | 4.90 |
| Luggage van | 9.60 |
| Passenger car (2 types) | 10.30 |
| 8.6 mm wheels on axles | .61 |
| 5.2 mm wheels on axles | .52 |
| Link & pin couplings, pair | .64 |
| Transporter bogie ramp | 5.75 |

## SCALE STRUCTURES American H0 kits

| | |
|---|---|
| Ford Inspection car, H0/H0n3 | 7.90 |
| Kleiber stake body truck, open cab | 7.90 |
| Kleiber stake body truck closed cab | 7.90 |
| Kleiber tank truck, closed cab | 7.90 |
| Kleiber dump truck, closed cab | 7.90 |
| Kleiber semi-trailer van, open | 11.90 |
| Kleiber flatbed, open cab | 12.90 |
| Autocar delivery truck | 8.90 |
| Autocar delivery truck | 8.90 |

## DURANGO PRESS American H0 kits

| | |
|---|---|
| H0 handcar | 2.90 |
| Ashpit with crane | 7.90 |
| Coal loader | 4.90 |
| Dutchman mining supply | 11.90 |
| H0 rotary snow plough | 59.95 |

## RIO GRANDE MODELS H0 kits

| | |
|---|---|
| H0n3 Westside tank car | 19.00 |
| H0n3 Rio Grande Flanger | 19.00 |
| Marion steam shovel, suitable for H0 or H0n3 trucks | 71.00 |

## POSTAGE

Under $10, add 80c; $10 to $50 add $1.50; over $50 add $2.00.

WILLOUGHBY FESTIVAL

SIXTH

# MODEL RAILWAY EXHIBITION

AT THE

CHATSWOOD CIVIC CENTRE
VICTORIA AVENUE, CHATSWOOD
(BETWEEN ANDERSON & ARCHER STs.)

**17th & 18th MARCH, 1979**

SATURDAY 9.00 am-9.00 pm
SUNDAY 10.00 am-6.00 pm

ADULTS $1.00 CHILDREN, PENSIONERS 80¢

## GENERATION ONE

You asked for it — Here it is. A booklet for every modeller of NSW prototype.

Generation One is a pictorial based on the early diesel and electric locomotives of the NSWGR — the first generation of modern motive power. Large 280 mm + 210 mm format: 60 big size black and white photographs, together with 6 full pages of colour.

Classes represented include 40, 41, 42, 43, 71, 72 and 79, most of which have now been scrapped.

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Here is a book, the likes of which has never been seen before in Australia. 90 pages of full colour photos of steam trains in many locations throughout the world. But this is not just a picture book, it is a work of art. Compiled by Gunter Haslbeck of West Germany and David Wardale of South Africa, they present their camera work, with contributions from others, for your admiration. The photographs in this book are impressions of a most beautiful art form — the steam locomotive.

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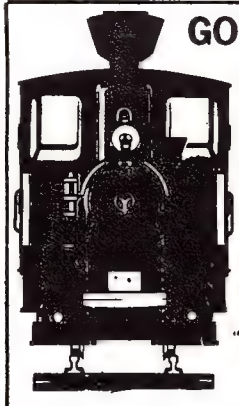
Trade enquiries for these books are welcome.
Published and distributed throughout Australia by Australian Railway Historical Society, NSW Division,
PO Box E129, St James, NSW 2000.



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| BACHMANN | RIVAROSSI |
| MODEL POWER | PECO |

**KITS:**
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**RAIL TRACK:**
HORNBY, PECO, LIMA, TYCO.

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TO ALL MODELLERS WHO HAVE PURCHASED OUR HIGHWAY CROSSING FLASHER MODULE, MODEL No. HCF — 202 — BIC

We have discovered that some minor modifications are necessary to the above unit.
As our policy is one of continual product improvement, we have made design changes to the above unit, and would like to make the necessary improvements to those modules which have already been purchased.
These improvements consist of:
Changes to the train detection circuitry;
A small power amplifier to give increased volume to the bell sound.
THERE WILL BE NO CHARGE FOR THESE MODIFICATIONS
However, we would appreciate purchasers, on returning their units for modification, including $2.50 for pack and post, with their return address.
We apologize for any inconvenience.
Would retailers also please return their stocks for similiar modifications.

Yours Faithfully,
**G. HARRIS (Prop)**
**TEMPEST ELECTRONICS**

*As a New Year Special, we have reduced the price of the Keystone Shay till 28th February. This item will be available through participating dealers in most States. Dealers write for details.*

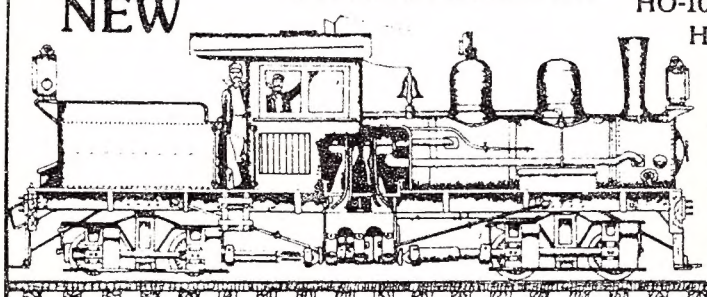
## HO 2-CYL. CLASS A. SHAY

CAST METAL ASSEMBLY KIT.

NEW

HO-105 n 3 $45

HO-105 $45



- Diamond & Shotgun Stack
- Wheels & Mechanism Turn
- K D Couplers Fit
- Wood, Coal or Oil Tender
- Non-Powered Model
- Brass Wire & Handrail Stanchions
- Exploded Assembly Drawings

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159 Wheatley Ave., Northumberland, PA 17857

### ATHEARN LOCOS

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|---|---|
| PAI SF, SP | 25.50 |
| PBI SF | 25.50 |
| PAI Dummy | 10.75 |
| RDC Coach or Combine | 15.50 |
| SD9 BN, SF | 25.50 |
| DD40 UP | 36.50 |

### ROUNDHOUSE

| | |
|---|---|
| 40' Box Cars | 4.05 |
| 50' Box Cars | 4.05 |
| Covered Hoppers | 4.75 |

### EKO VEHICLES

| | |
|---|---|
| Ford Falcon | 1.10 |
| Plymouth Suburban | 1.10 |

### TRAMS

| | |
|---|---|
| Ken Kidder Double Truck Birney | 28.50 |
| Mehano Car and Trailer | 19.75 |

### ATHEARN ROLLING STOCK

| | |
|---|---|
| 40' Box Cars, Reefers, Stock | 3.10 |
| 50' Auto Cars, Box Cars | 3.40 |
| Cabooses | 3.40 |

### MODEL POWER

| | |
|---|---|
| E-7 UP, SF | 38.00 |
| Rolling Stock | 3.05 |

### KEYSTONE 'O'

| | |
|---|---|
| K1000 Log Car Kit | 20.20 |
| K1002 Danby Sawmill | 50.00 |
| K1005 Grasse River Cab | 24.25 |
| K1006 Grasse River Log Buggie | 24.25 |
| K1008 PRR Pass Shelter | 33.75 |
| Detail Parts | from .50¢ |

### KEYSTONE 'HO'

| | |
|---|---|
| HO 1 Logging Tools | 2.40 |
| HO 2 Engine House Junk | 2.00 |
| HO 12 Drivers and Axles | 4.00 |
| HO 14 Logging Junk | 2.00 |
| HO 15 Diesel Engine Junk | 5.45 |
| HO 17 Corrug Metal | 2.05 |
| HO 20 Small Boiler | 1.70 |
| HO 104 Barnhart Loader | 33.75 |
| HO 112 Band Sawmill | 81.00 |
| HO 117 PRR Pass Shelter | 18.95 |

### WALTHERS

| | |
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*Continued from page 44*

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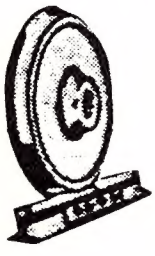

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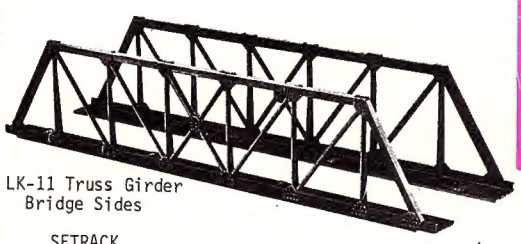

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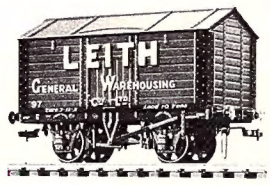


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| LK-11 Truss Girder Bridge Sides (2) | 2.00 |
| LK-21 Chocolate Machines (6) | 1.15 |
| LK-22 Weighing Machines (4) | 1.00 |
| LK-23 Milk Churns (24) | 1.25 |
| LK-24 Packing Cases (6) | 1.25 |
| LK-25 Platform Seats (12) | 1.50 |
| LK-45 Flexible Field Fencing | 1.50 |
| LK-46 Field Gates, Stiles & Wicket Gates | 1.50 |
| LK-50 Level Crossing w/wicket gates & fencing | 2.50 |
| LK-51 Level Crossing w/boom gates & fencing | 2.50 |

## WONDERFUL WAGON KITS

**COAL WAGONS, 7-Plank ---------- $4.50**

1404 (R-54M) Moseley
1405 (R-54E) Emlyn
1406 (R-54P) Pinxton
1407 (R-54N) Newbattle
1408 (R-54K) Kingsbury

**MINERAL WAGONS, 5-Plank ---------- $4.50**

1424 (R-70T) Tarmac
1425 (R-70B) Bibbington
1426 (R-70D) Dunsdon
1427 (R-70DS) Derbyshire Stone
1428 (R-70DN) Dixon

**BOX VANS ---------- $4.95**

1433 (R-72BC) Blue Circle
1434 (R-72Z) Izal
1435 (R-72B) Bass
1436 (R-72CK) Carrick
1437 (R-72W) Worthington
1438 (R-72S) Stuart
1439 (R-72F) Fyffes

**LOW-SIDED WAGONS, 3-Plank ---------- $4.50**

1444 (R-62PG) Pwhheli
1445 (R-62BC) Blaenavon
1446 (R-62FM) Field & McKay

**SALT VANS ---------- $4.95**

1484 (R-58SX) Saxa
1485 (R-58SH) Shaka
1486 (R-58CI) I.C.I.
1487 (R-58SS) Stafford
1488 (R-58US) Union

**GRAIN VAN, 10 ton ---------- $4.95**

1454 (R-58LW) Leith

**TANK CARS ---------- $4.50**

1494 (R-74S) Shell
1495 (R-74E) Esso
1496 (R-74BP) B.P.

**LIME VANS ---------- $4.95**

1464 (R-68D) Dowlow
1465 (R-68C) Crawshay
1466 (R-68S) S.L.B.

**CONFLAT ---------- $4.50**

1450 (R-64) Bauxite (with container)

**CONTAINERS FOR CONFLAT ---------- .60**

1666 (R-66C) Crosse & Blackwell
1667 (R-66SC) Silver Cross
1668 (R-66JL) Lyon's Tea
1669 (R-66R) Raleigh Cycles
1670 (R-66F) I.C. Fuzzey
1671 (R-66BR) British Rail

CATALOGUE of HO/OO, O & OO-9 LINES --- 1.50

LK-4 Platelayer's hut

LK-5 Coal office

*Prices shown in this advertisement are recommended prices only and there is no obligation for dealers to comply with the recommendation.*

*from good hobby shops everywhere*

LK-6 Bookstall